SONY

3-756-192-21 (1)

Portable CD-I Viewer

IVO-V11

Operating Instructions

Before operating this unit, please read this manual thoroughly and retain it for future reference.

INTELLIGENT Discman

CD-I CD INTERACTIVE

COMPACT disc Interactive

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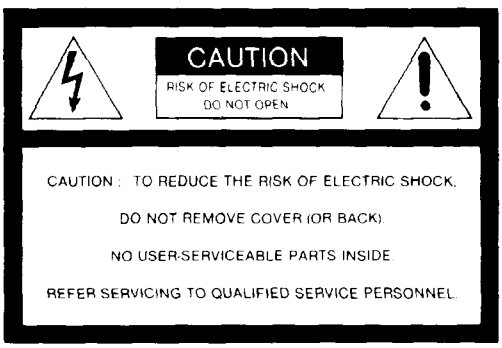
Owner's Record

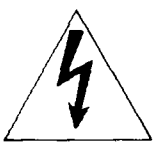
The model number and the serial number are located on the bottom.
Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. IVO-V11 Serial No._____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For the customers in the USA

CAUTION
You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interfence by one or more of the following measures:

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

CAUTION

The use of optical instruments with this product will increase eye hazard.

As the laser beam used in this CD-I viewer is harmful to the eyes, do not attempt to disassemble the cabinet.
Refer servicing to qualified personnel only.

For the customers in Canada

This apparatus complies with the Class B limits for radio noise emissions set out in Radio Interference Regulations.

Pour les utilisateurs au Canada

Cet appareil est conforme aux normes Classe B pour bruits radioélectriques, spécifies dans le Règlement sur le brouillage radioélectrique.

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Conventions

The following symbols are used in this manual.

◁ • △ • ▽ • ▷ : Left, top, bottom, right of the cursor key (page 6)

▶ • ▲ : Markers appearing on the LCD display (page 6)

: Safety caution

: Additional notes or tips for better operation

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Features

The IVO-V11 CD-I viewer offers the following features. Be sure to read the "Before You Begin" section (page 8) before you operate it.

CD-I Discs (page 14)
The IVO-V11 provides a monitor speaker and a color LCD display for you to enjoy both video and audio recorded on a CD-I disc.

Clock/Calendar/World Time Clock (page 20)
The IVO-V11 comes with clock, calendar and world time clock functions for display.

Compact Discs (page 16)
The IVO-V11 can play regular compact discs (CD).

As Video Monitor (page 41)
You can also use the IVO-V11's monitor speaker and color LCD display to enjoy video output from video equipment (e.g. camcorder).

What is CD-I?

CD-I (Compact Disc Interactive) is a type of multimedia technology. Each CD-I disc contains video, audio, and text data, as well as a program to manage them. Such design allows you to interact with the disc to determine how the program should proceed, thus making the process a lot of fun.

Playing a CD-I disc is simple: All you need is the cursor key, button 1, and button 2. The cursor key lets you move around within a CD-I program, while the two buttons trigger actions.

Discs the IVO-V11 CD-I Viewer Can Play

The viewer can play three formats of discs. Before you insert a disc, make sure its logo is listed in the table below.

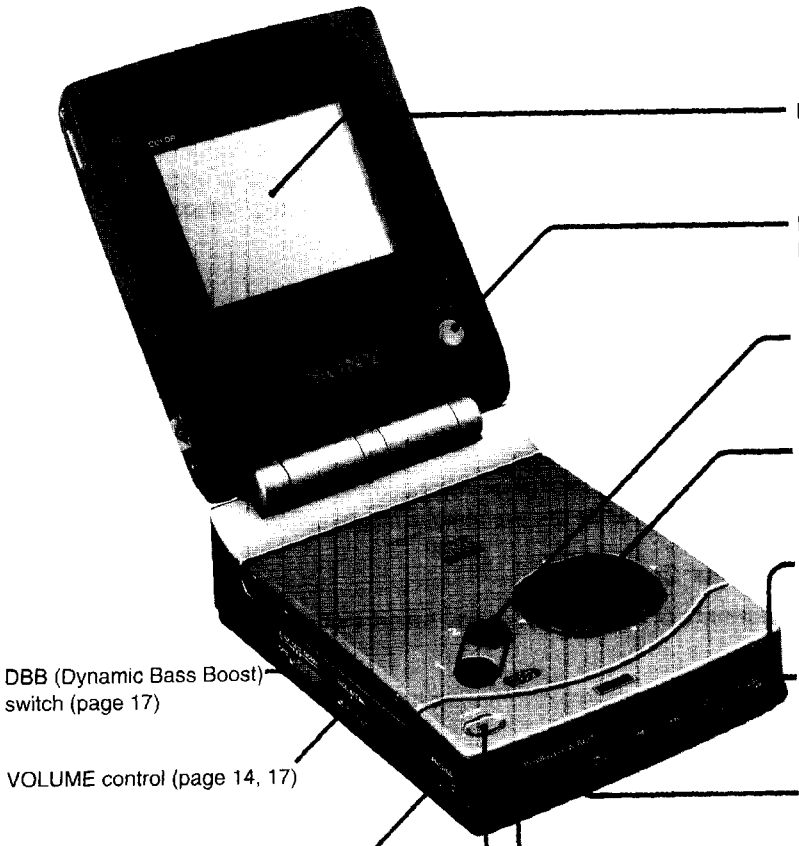
Disc Formats	CD-I	CD		CDV (Video cannot be displayed)
Disc Logo	COMPACT disc Interactive	CD SINGLE	COMPACT disc DIGITAL AUDIO	CD VIDEO CDV
Disc Type	CD-I discs	8-cm CD singles	CD	CDV
Size	8 or 12 cm	8 cm	12 cm	12 cm
See Page	14	16		

Some CD-I discs may also contain audio tracks (similar to those on regular compact discs).

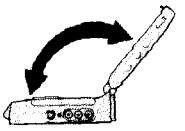
A disc that is based on specifications of bridge format, such as Photo CD, can be played on this machine the same way of playing CD-I discs.

Identifying the Parts

Numbers in parentheses indicate page numbers for detailed description.


LCD display
LCD ON/OFF button (page 15)
Button 1, button 2
◁•△•▽•▷ (cursor) key
PLAY/PAUSE indicator (page 16, 17)
Buttons to operate CD (page 16,17)
▶▶I I◀◀ (AMS)* buttons
▷II (play/pause) button
□ (stop) button
Power switch (page 10, 14, 16)
DBB (Dynamic Bass Boost) switch (page 17)
VOLUME control (page 14, 17)
PHONES jack (stereo minijack) (page 17)
OPEN button (page 14, 16)
POWER/LOW BATT indicator (page 10, 14, 16)

Reading angle

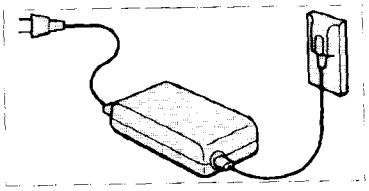


Tilting the LCD display adjusts the reading angle.

* AMS: Automatic Music Sensor, a function used for detecting the beginning of a selection.

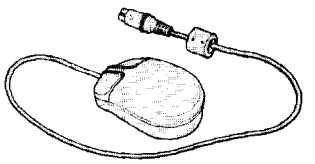
Checking the Package Contents

Make sure the following accessories are also included in the package. If any of them is missing, call your local Sony service facility.

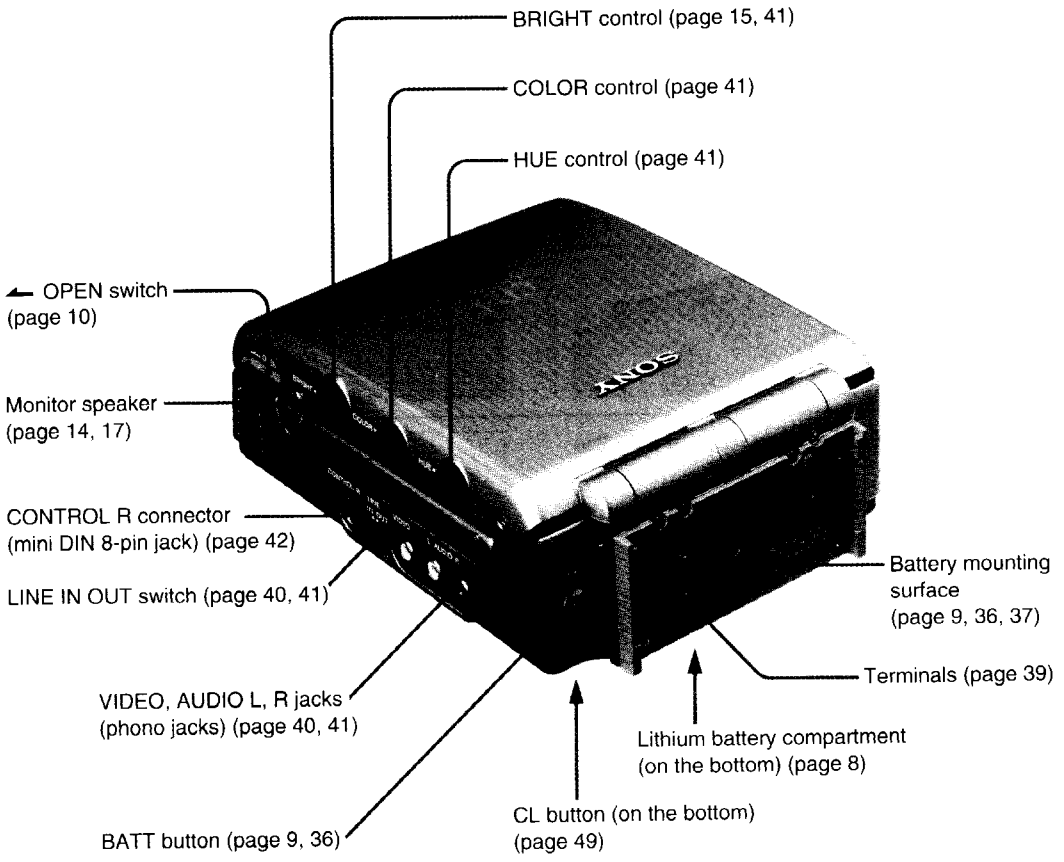


AC-IV10 AC power adaptor (1 pc) (page 9)

CR2032 Lithium battery (1 pc) (page 8)



IVA-M10 CD-I mouse (1 pc) (page 42)


BRIGHT control (page 15, 41)
COLOR control (page 41)
HUE control (page 41)
OPEN switch (page 10)
Monitor speaker (page 14, 17)
CONTROL R connector (mini DIN 8-pin jack) (page 42)
LINE IN OUT switch (page 40, 41)
VIDEO, AUDIO L, R jacks (phono jacks) (page 40, 41)
BATT button (page 9, 36)
CL button (on the bottom) (page 49)
Lithium battery compartment (on the bottom) (page 8)
Terminals (page 39)
Battery mounting surface (page 9, 36, 37)

CONTROL R connector

Before connecting the IVA-M10 CD-I mouse (supplied), be sure to turn off the viewer, otherwise malfunction may occur. When the mouse is connected, a pointer (e.g. ↑) will appear on the LCD display. (For details, see page 42.)

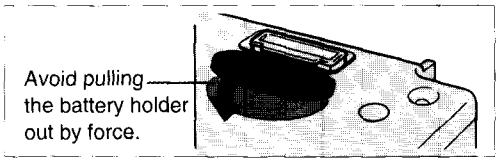
Before You Begin

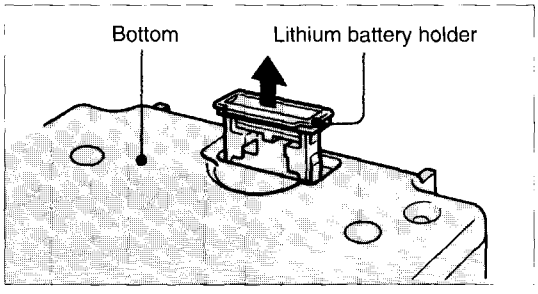
The following setups prepare the CD-I viewer for operation, so be sure to complete them before you start using the viewer.

Setup 1: Inserting the Lithium Battery

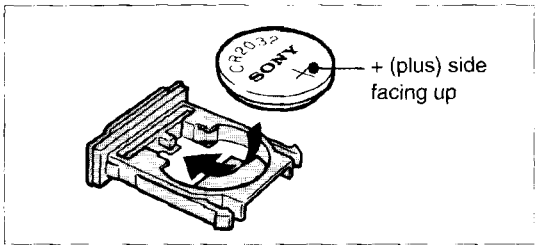
The supplied lithium battery keeps the internal clock running even when the viewer is not supplied with power from other sources. To insert the battery, follow the steps below.

1 Pull out the lithium battery holder.
If necessary, use a coin (or similar object) to pull out the battery holder as indicated.

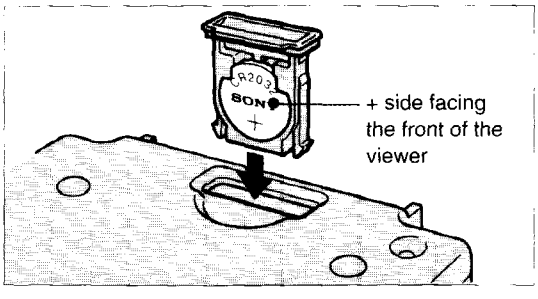




2 Insert the supplied lithium battery into the holder.



3 Put the battery holder back into the viewer.



Replacing the lithium battery

The lithium battery lasts for about 2 years. When it becomes dead, replace it as follows:

1 Connect the viewer to a power source (page 9).
2 Replace the used lithium battery with a new one.

If the viewer is not connected to a power source when you replace the lithium battery, the memory contents of the viewer will be lost, and you need to set the date and time again.

Replace the battery with a Sony CR2032 or Duracell DL-2032 lithium battery. Use of any other battery may present a risk of fire or explosion.

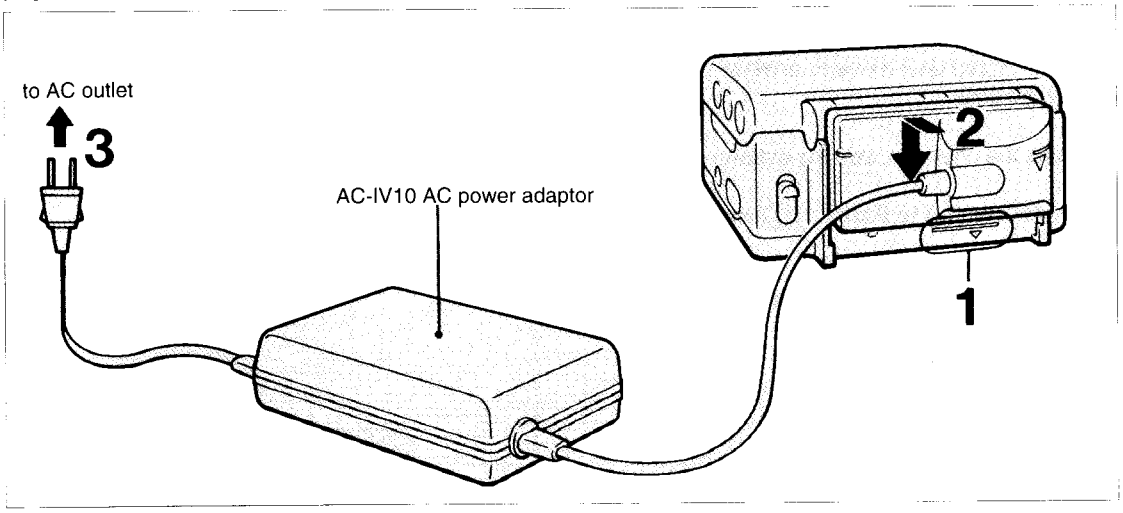
Lithium battery

- Keep the lithium battery out of the reach of children. Should the battery be swallowed, consult a doctor immediately.
- Before use, wipe the battery with a dry cloth to ensure good contact.
- Insert the battery with the correct polarity.
- Do not hold the battery with metalic tweezers, otherwise a short-circuit may occur.

WARNING
Battery may explode if mistreated. Do not recharge, disassemble, or dispose of in fire.

Setup 2: Connecting to an AC Outlet

The viewer can work with AC power or a rechargeable battery pack (not supplied). The following describes how to connect the supplied AC-IV10 AC power adaptor. If you want to use the battery pack, see page 37 for details.



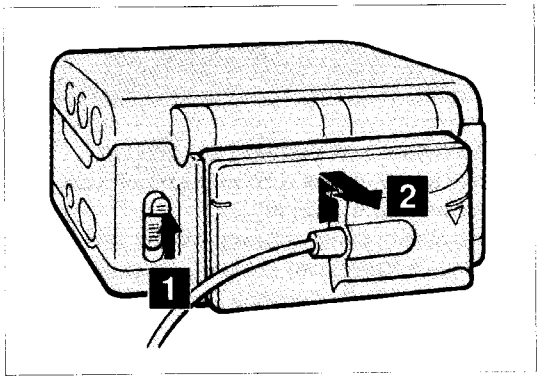
1 Align the bottom of the connecting plate with the line on the viewer.

2 While pressing the connecting plate, slide it as indicated.

3 Plug the AC power adaptor into an AC outlet.

Removing the connecting plate

While pushing up the BATT button 1, slide the connecting plate as indicated 2.



Refer also to the operating manual that comes with the AC-IV10.

Setup 3: Setting the Date and Time

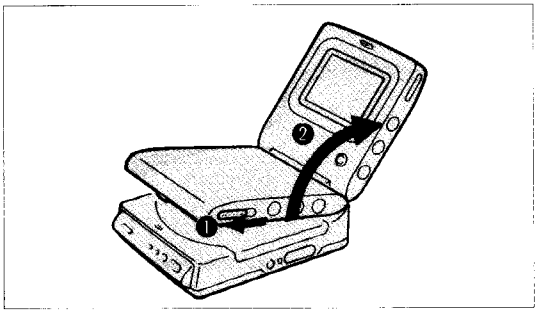
Set the date and time after you have completed Setup 1 and Setup 2 (page 8, 9). This is necessary as some CD-I discs rely on the correct date and time to work properly. Valid range is from 1988 to 2037.

When setting the date and time, you must first specify the current time zone (the country or area where you are). If you later move to another country, you need to change the zone name to that country and modify the time.

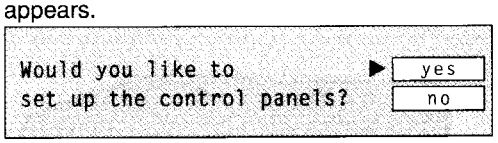
To make the changes, use the buttons on the viewer; the supplied mouse cannot make the changes.

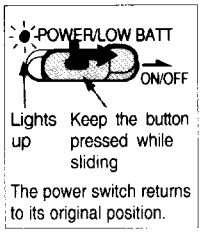
Example: Setting to Paris, 11:17 am, July 4, 1993

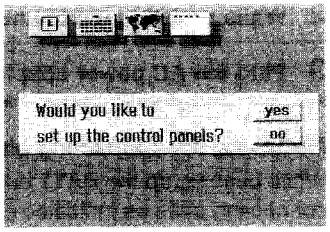
1 While sliding the ← OPEN switch forward ❶, lift the top cover ❷.



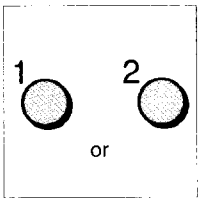
2 Slide the power switch (with the green button pressed) to the right, then release it.
In a few seconds, the following message appears.

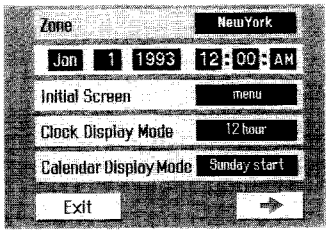




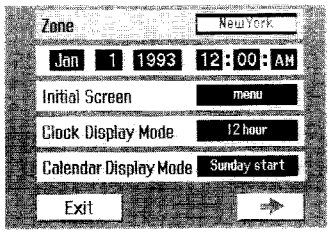


3 Make sure ▶ is pointing at [yes] (if necessary, press △ to move ▶). Press button 1 or button 2.
The control panel appears and the zone option is highlighted (in cyan). (Pressing △ or ▽ moves to other options.)



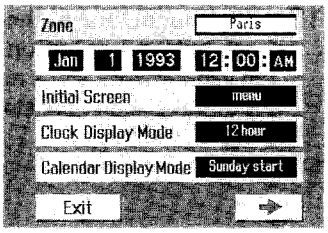


4 Press button 1 or button 2.
[New York] is displayed in black on white, indicating that it is ready for change.

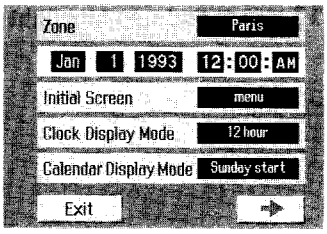


If [no] is selected in step 3
The initial screen appears. If this happens, turn off the viewer and try again, or do so when you operate the viewer again (page 47).

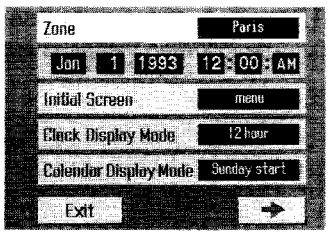
5 Press ▷ or ◁ until the desired zone appears (Paris in this example).
(See page 13 for the time zone chart.)



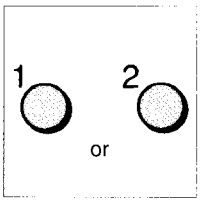
6 Press button 1 or button 2.
The desired zone is displayed in white on black again.

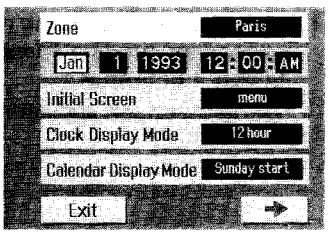


7 Press △ or ▽ to highlight the date and time option.

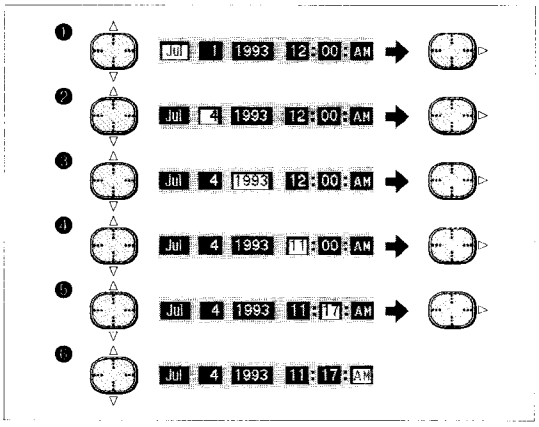


8 Press button 1 or button 2.
Jan is displayed in black on white, indicating that it can be changed.

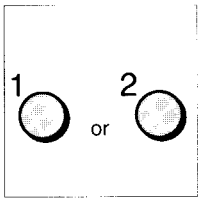


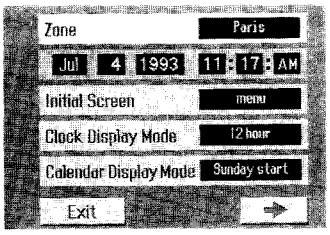


9 Press ▷ or ◁ to move to an item within the date and time option. Then press △ to increase or ▽ to decrease its value. This sets the date and time (time is shown in 12-hour format).
In the date and time option, the time must be standard time. Otherwise, DS TIME will not be displayed correctly in the world time clock function.

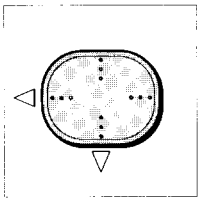


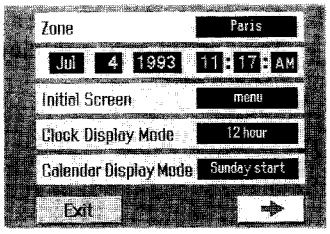
10 Using a local time-of-the-day service, press button 1 or button 2 to set the time.
The internal clock starts running. If there is any mistake, start from step 8 again.



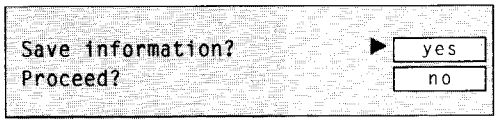


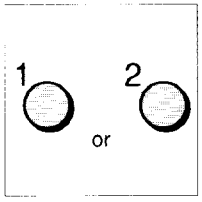
11 Use ▽ and ◁ to highlight [Exit].

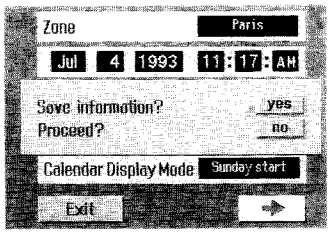




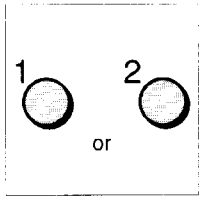
12 Press button 1 or button 2 to confirm.
The following message appears.

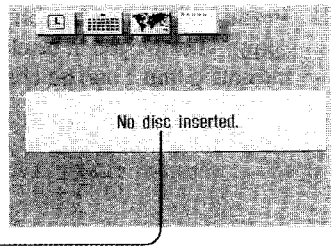






13 Make sure ▶ is pointing at [yes] (if necessary, press △ to move ▶). Press button 1 or button 2.
The initial screen appears.

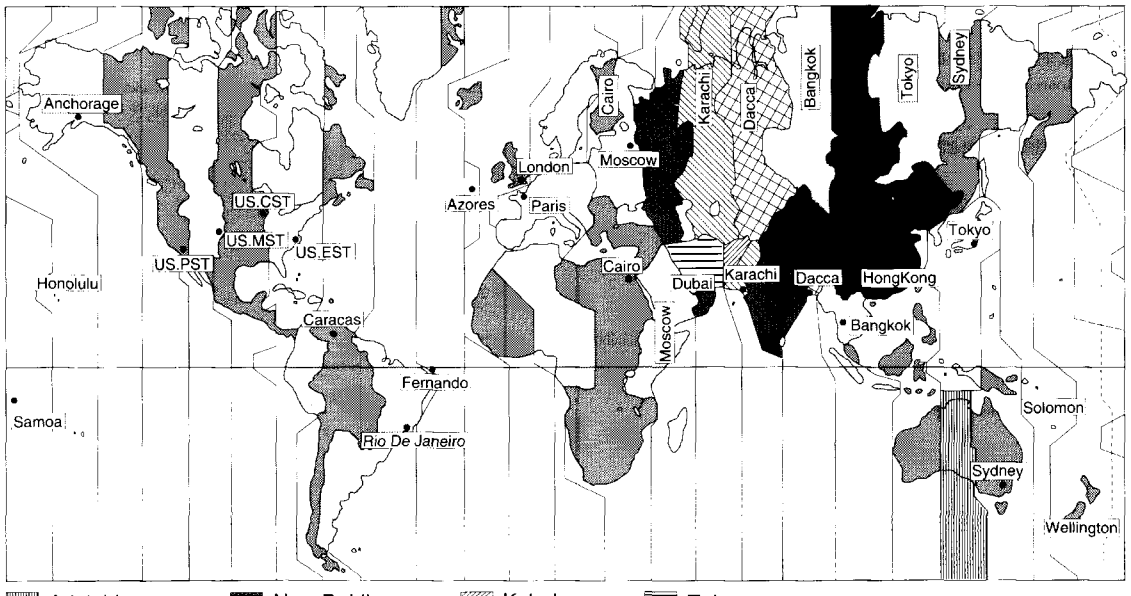




Message disappears in a few seconds.

Correcting date and time
To correct, start from step 8. If you have already come to step 13, do the following:
1 Turn off the viewer (by sliding the power switch to the right and release it).
2 While holding button 1 and button 2 down, turn on the viewer (see step 2 on page 10). Do not release the buttons until the control panel appears.
3 Start from step 8 on page 11 and make the correction.

Time zone chart



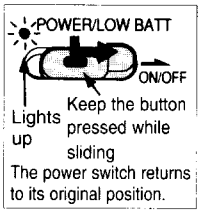
Zone name	Countries or area
London	England, GMT (Greenwich Mean Time), Portugal
Paris	Austria, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland
Cairo	Egypt, Greece, Israel, Turkey
Moscow	Iraq, Kenya, Saudi Arabia, former USSR (west)
Tehran	
Dubai	United Arab Emirates
Kabul	
Karachi	Moldives, Pakistan
New Delhi	
Dacca	Bangladesh, India, Myanmar
Bangkok	Cambodia, Indonesia (Jakarta), Thailand, Vietnam
Hong Kong	Australia (west), China, Hong Kong, Indonesia (Bali, Borneo), Malaysia, Philippines, Singapore, Taiwan
Tokyo	Japan, Korea
Adelaide	
Sydney	Australia (east), Guam, Saipan
Solomon	New Caledonia
Wellington	Fiji, New Zealand
Samoa	Western Samoa
Honolulu	HST (Hawaii standard time), Tahiti
Anchorage	AST (Alaska standard time)
Los Angeles	PST (Pacific standard time)
Denver	MST (Mountain standard time)
Chicago	CST (Central standard time), Mexico
New York	EST (East standard time), Peru
Caracas	Chile, Venezuela
Rio de Janeiro	Argentina, Brazil
Fernando	Fernando de Noronha
Azores	Azores Islands

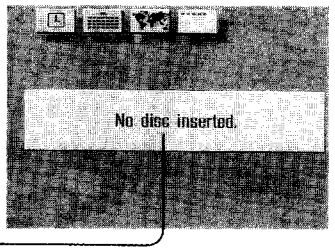
The countries and areas shown in the table are common names. They may be different from their formal country names.

Playing a CD-I Disc

Playing a CD-I disc is simple: All you need is the cursor (◁ • △ • ▽ • ▷) key, button 1 and button 2. You must, however, have completed the steps described in the "Before You Begin" section (page 8-13). Also, if you want to connect the viewer to a TV for viewing, see page 40.
If the viewer is already turned on, skip step 1.

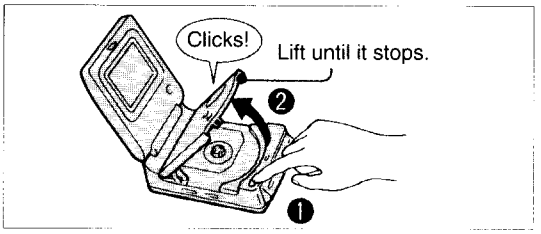
1 Slide the power switch (with the green button pressed) to the right, then release it.
In a few seconds, the initial screen appears.



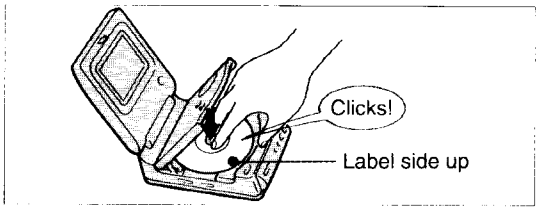


Message disappears in a few seconds (or when button 1 or button 2 is pressed).

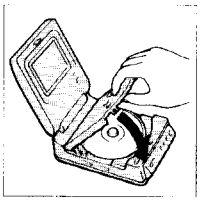
2 Press the OPEN button ❶ and open the disc cover ❷.

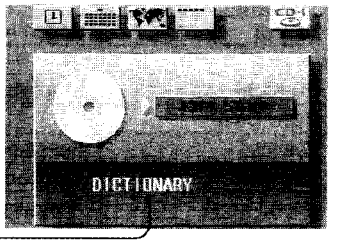


3 Put a CD-I disc into the disc compartment.
Push gently around the center of the disc until it clicks into place.



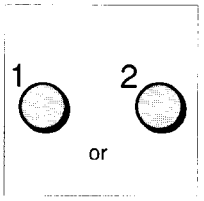
4 Close the disc cover.
CD-I appears on the initial screen.

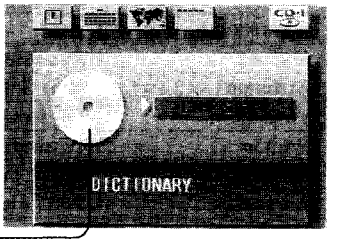




CD-I title

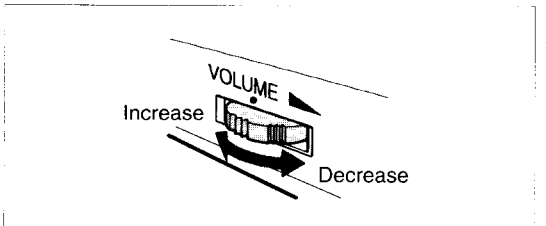
5 Press button 1 or button 2.
The CD-I disc starts playing.





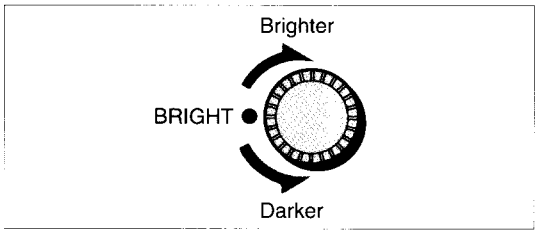
Rotating

6 Turn the VOLUME control (on the left side of the viewer) to adjust the volume.
The monitor speaker can output sound in monaural only.



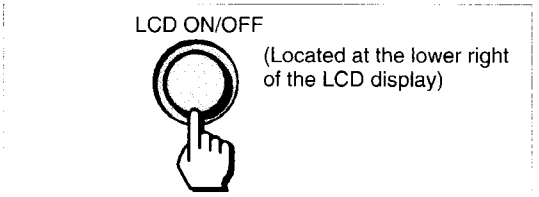
Adjusting the brightness

Turn the BRIGHT control (on the right side of the LCD display) to adjust the brightness. (Note: the COLOR and HUE controls are operative only when the viewer is connected to video equipment.)



Turning off the LCD display

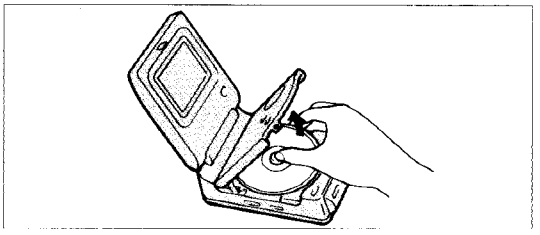
If you do not need to use the LCD display (e.g. when you are using a TV for viewing), you can turn it off to save power.



Pressing it again turns on the display.

Removing a CD-I disc

Hold the disc as indicated, and remove it from the disc compartment.



Turning off the viewer

Slide the power switch (with the green button pressed) to the right again, then release it.

Each CD-I disc may end its program differently, so be sure to refer to the disc instructions.

To play a multi-disc CD-I program

At the 2nd control panel, set to Set Disc Handling : yes (page 28).
The viewer will then keep the information about the last disc, when a new disc is inserted.

Some CD-I discs may take a longer time to start than others.

The screen appears in blue when a CD-I disc is starting up. This is not a malfunction.

When a CD-I disc is being played, the auto power-off feature (page 28) becomes inoperative.

Auto start (page 28)

At the 1st control panel, if the CD-I auto start is set to CD-I Auto Start : yes, the disc starts playing as soon as it is inserted into the viewer.

To play the CD-I disc when the clock, calendar, or world time clock is displayed (page 20)

1 Press the cursor key (◁ or ▷) until ▲ is pointing at CD-I.
2 Press button 1 or button 2.
3 Make sure ▶ is pointing at CD-I Start. Press button 1 or button 2, and the CD-I disc starts playing.

When both CD and CD-I appear

This means the disc contains audio tracks (similar to those on regular compact disc) as well. CD-I will be selected and played. To play back the audio tracks, see page 16.

If ⛁ appears in front of a CD-I title

This indicates two or more CD-I discs are to be used. This symbol, however, will not appear if multi-disc CD-I title handling at the 2nd control panel is set to Set Disc Handling : no (page 28).

If you hear noise coming out from the viewer

This indicates the viewer is searching for information or the next scene. This is not a malfunction.

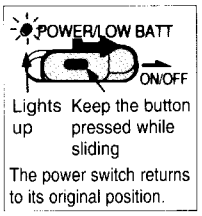
About the LCD display

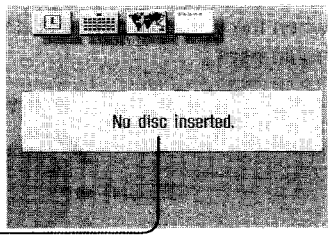
If the LCD display is in use, closing the top cover automatically turns it off, but subsequently opening the cover turns it back on again.

Playing a Compact Disc

The viewer can play regular compact discs (i.e. 8-cm CD singles). Before you start, make sure the viewer is connected to a power source: AC or battery pack (page 36, 37).

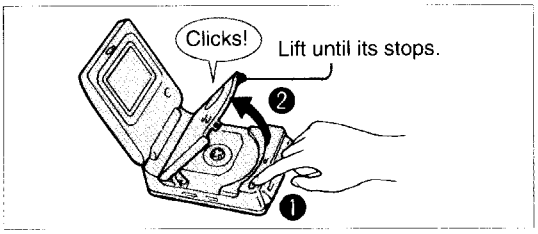
1 Slide the power switch (with the green button pressed) to the right, then release it.
In a few seconds, the initial screen appears.



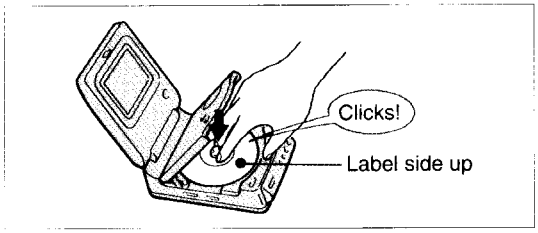


Message disappears in a few seconds (or when button 1 or button 2 is pressed).

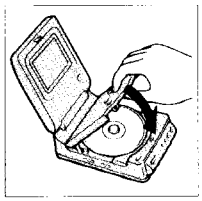
2 Press the OPEN button ❶ and open the disc cover ❷.



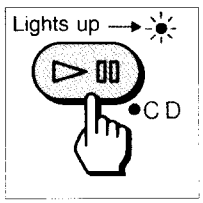
3 Put a compact disc into the disc compartment.
Push gently around the center of the disc until it clicks into place.

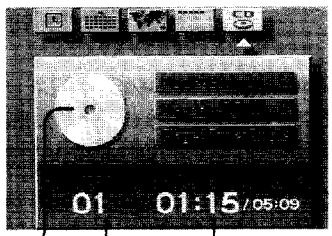


4 Close the disc cover.
[CD] appears, followed by the CD screen.



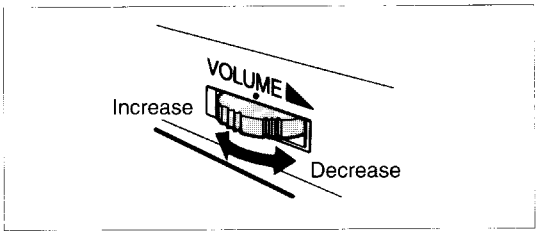
5 Press ▷II.
The compact disc starts playing.



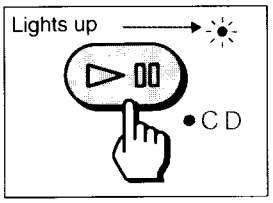


Rotating
Current selection
Play time (page 19)

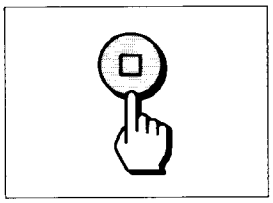
6 Turn the VOLUME control to adjust the volume.
The monitor speaker can output sound in monaural only.



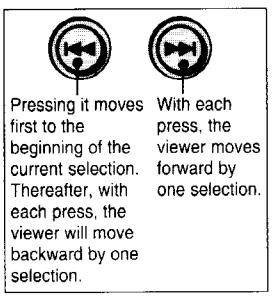
To pause
Press ▷II once. Pressing it again resumes playing.



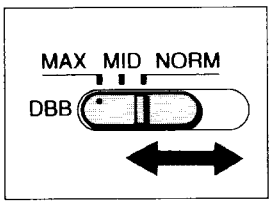
To stop
Press □.



To locate a desired selection


Pressing it moves first to the beginning of the current selection. Thereafter, with each press, the viewer will move backward by one selection.
With each press, the viewer moves forward by one selection.

To listen to powerful bass sound
Slide the DBB switch (on the left side of the viewer) towards the left to increase the bass, and use the headphones (not supplied) to enjoy the effect.



To remove the CD disc
See "Removing a CD-I disc" section on page 15 for detailed description.

Sound tracks and time
When a compact disc is inserted, the total number of tracks (selections) and time will appear in a few seconds.

Using headphones
Plug a stereo mini plug-type headphones (e.g. those used for Walkman®) into the PHONES jack. Try not to disturb people around you with the sound from your headphones.

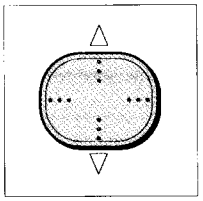
Displaying date and time functions
When the compact disc is being played, you can display the clock, calendar, or world time clock (page 20).

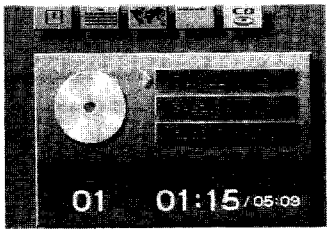
Selecting a Play Mode

For your music enjoyment, you can change and repeat the order of selections on the compact disc to be played. Up to six ways are listed on the next page for your choice.

Changing the order of selections

1 **Use △ or ▽ to move ▶ to [Mode].**

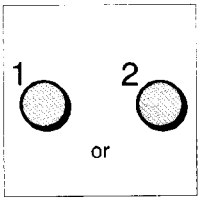


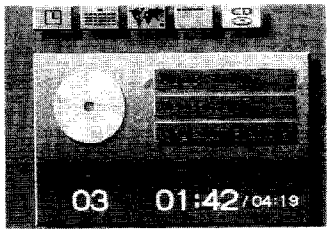


2 **Press button 1 or button 2.**
Each press changes the order as follows:

Shuffle → Single → Continue →

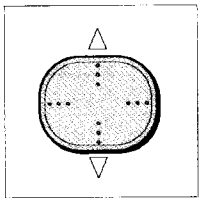
See the table on page 19 for detailed description.

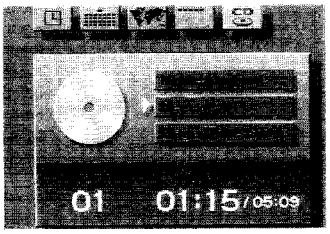




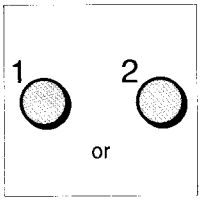
Repeating the order of selections

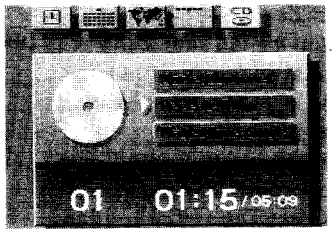
1 **Use ▽ or △ to move ▶ to [Repeat].**





2 **Press button 1 or button 2.**
Each press switches the repeat function ON or OFF. See the table on page 19 for detailed description.



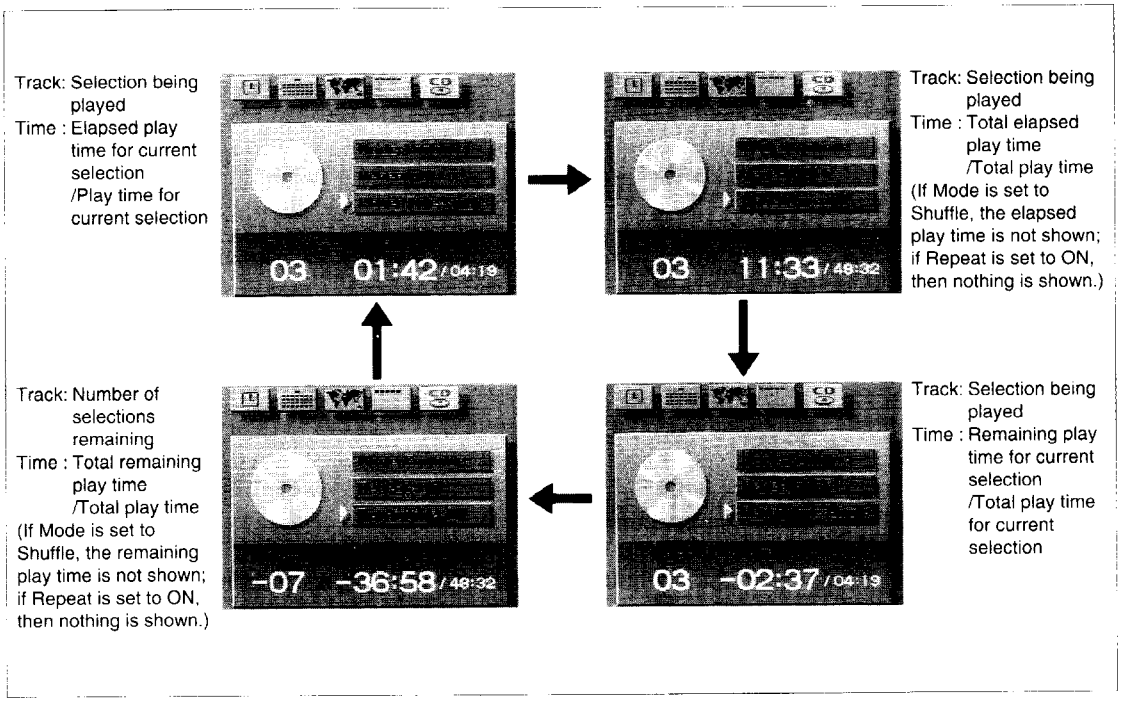


Compact disc play mode

Play mode	Set Mode to	Set Repeat to	Screen
Play all selections in natural order once.	Continue	OFF	Mode:Continue Repeat:OFF
Play all selections in natural order repeatedly.	Continue	ON	Mode:Continue Repeat:ON
Play all selections in random order once.	Shuffle	OFF	Mode:Shuffle Repeat:OFF
Play all selections in random order repeatedly.	Shuffle	ON	Mode:Shuffle Repeat:ON
Play a single selection once.	Single	OFF	Mode:Single Repeat:OFF
Play a single selection repeatedly.	Single	ON	Mode:Single Repeat:ON

Displaying the play time

Use ▽ to move ▶ to [Played Time :] or [Remain Time :], and press button 1 or button 2. Each press changes the meanings of track and time as follows.

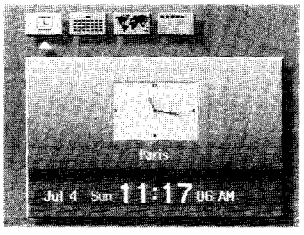

Track: Selection being played
Time : Elapsed play time for current selection /Play time for current selection
03 01:42/04:19
Track: Selection being played
Time : Total elapsed play time /Total play time
(If Mode is set to Shuffle, the elapsed play time is not shown; if Repeat is set to ON, then nothing is shown.)
03 11:33/48:32
Track: Selection being played
Time : Remaining play time for current selection /Total play time for current selection
03 -02:37/04:19
Track: Number of selections remaining
Time : Total remaining play time /Total play time
(If Mode is set to Shuffle, the remaining play time is not shown; if Repeat is set to ON, then nothing is shown.)
-07 -36:58/48:32

How to Select a Date and Time Function

Across the top of the initial screen are a number of icons (graphic symbols) each representing a function you can select. For example, the following illustration contains the clock, calendar, world time clock, and menu icons. If a CD-I disc or compact disc is inserted, its corresponding icon will also appear on the screen.

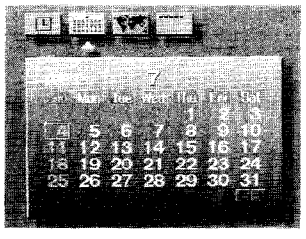
To display the time correctly, you must have completed the procedure described in the "Setup 3: Setting the Date and Time" section (page 10).

The following shows how to select a date and time function.



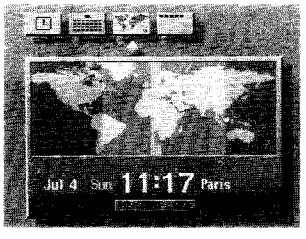
Clock
Displays current date, time, and day of the week.

Use ◁ or ▷ to move ▲ to [calendar], and press button 1 or button 2.



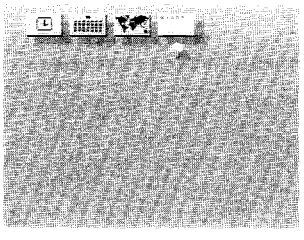
Calendar
Brings up the calendar.

Use ◁ or ▷ to move ▲ to [world], and press button 1 or button 2.



World time clock
Brings up the world time clock. Daylight saving (summer time) can also be set.

Use ◁ or ▷ to move ▲ to [menu], and press button 1 or button 2.



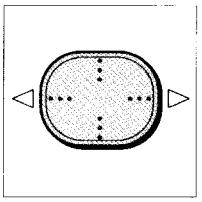
Menu
Selects clock, calendar, or world time clock for display.

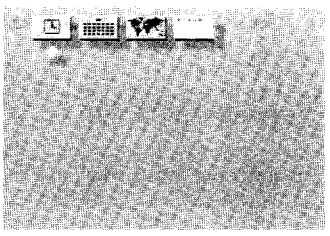
Use ◁ or ▷ to move ▲ to [clock], and press button 1 or button 2.

Using the Clock

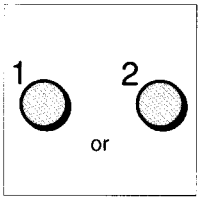
Selecting the [clock] icon displays the current time, date, and day of the week. This is also possible even when a compact disc is being played.

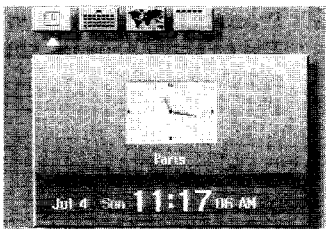
1 Use ◁ or ▷ to move ▲ to [clock].





2 Press button 1 or button 2.
The clock appears.





Removing the clock display

1 Use ◁ or ▷ to move ▲ to [ ].
2 Press button 1 or button 2.

Time display format

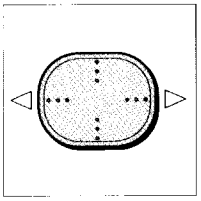
The digital clock display can be set to either 12- or 24-hour format (page 28).

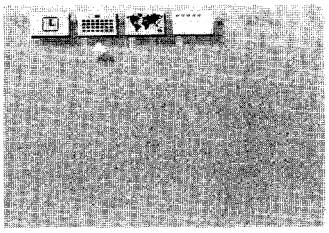
Selected time zone is displayed below the clock.

Using the Calendar

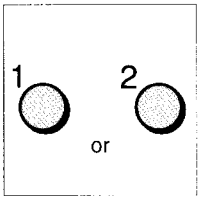
Selecting the [icon] icon brings up the calendar. This is also possible even when a compact disc is being played.

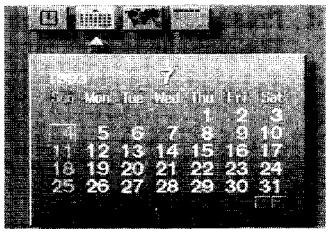
1 Use ◁ or ▷ to move ▲ to [icon].





2 Press button 1 or button 2.
The calendar appears, showing the current month.





Removing the calendar display

1 Use ◁ or ▷ to move ▲ to [icon].
2 Press button 1 or button 2.

Calendar display format

The calendar display can be set to start from either Sunday or Monday (page 28).

The clock is based on the standard time

Therefore, at midnights during the daylight saving period, the frame line (the square that marks the current day) will not move to the next day immediately; the movement will be delayed.

Displaying other months

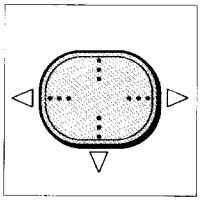
When the current month appears, use the steps below to display other months.

1 Press ▽ once and ▲ will be pointing at ◀ or ▶.

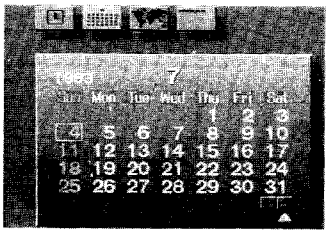
◀ displays the previous month

▶ displays the following month

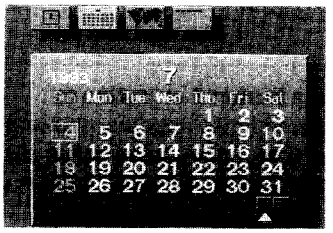
(If necessary, press ◁ or ▷ to move ▲.)



To display the following month



To display the previous month

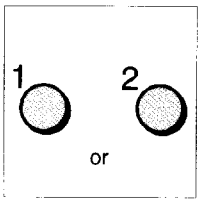


2 Press button 1 or button 2.

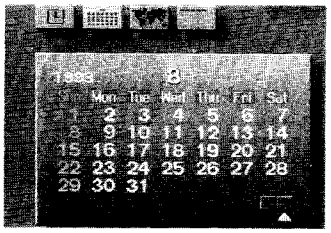
If ▲ is pointing at ▶, each press moves the calendar to the following month.

If ▲ is pointing at ◀, each press moves the calendar to the previous month.

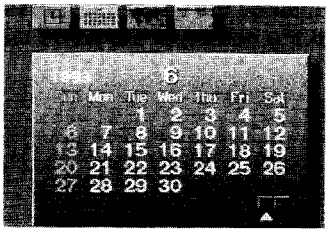
To return ▲ to 📅, press △.



To display the following month



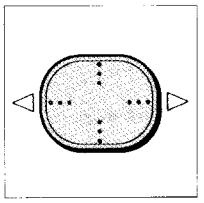
To display the previous month

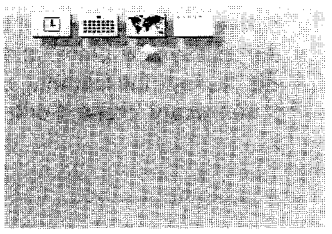


Using the World Time Clock

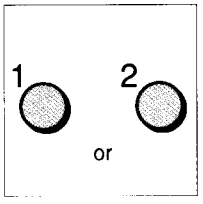
Selecting the 🗺 icon brings up the world time clock with the daylight saving (summer time) option. This is also possible even when a compact disc is being played.

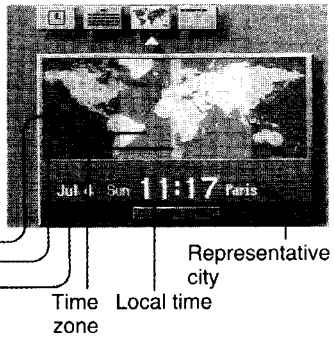
1 **Use ◁ or ▷ to move ▲ to 🗺.**



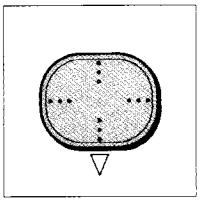


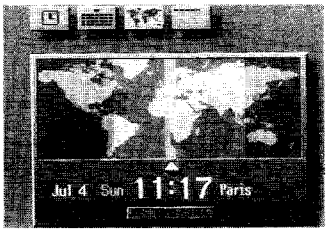
2 **Press button 1 or button 2.**
The world map appears, showing the date, local time, and representative city of the current time zone (highlighted in yellow).



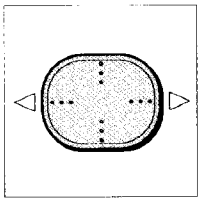


3 **To change the time zone, press ▽ to move ▲ to the bottom of the world map.**





4 **Use ◁ or ▷ to move ▲ to the desired time zone.**
The date, local time, and representative city of the desired time zone appear.



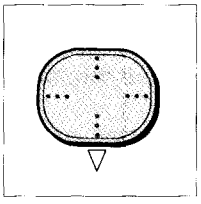
Removing the world time clock display

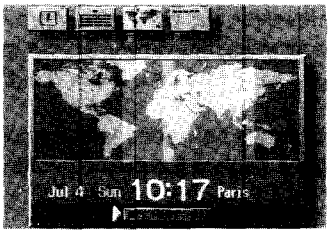
1 Use ◁ or ▷ to move ▲ to ⌨.
2 Press button 1 or button 2.

Effecting daylight saving time

Set DS TIME (Daylight Saving Time) to ON.

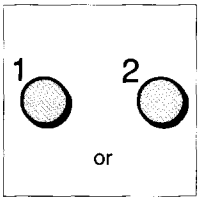
1 **Use ▽ to move ▶ to DS TIME:OFF.**

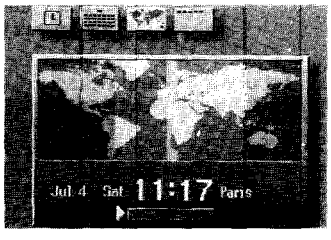




2 **Press button 1 or button 2.**

The setting changes to DS TIME:ON and the summer time is in effect. (In other words, the clock is moved forward by one hour.)
Pressing the button again returns to standard time.





✍ Setting the DS TIME affects only the world time clock, but not the clock.

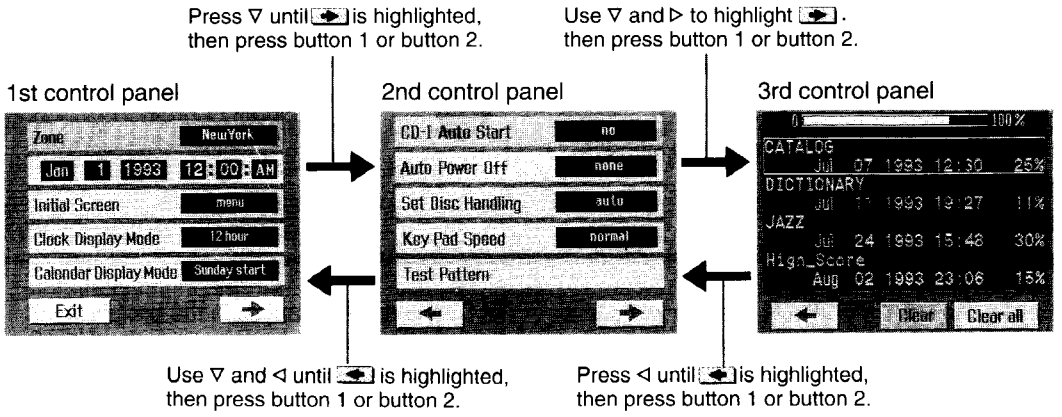
✍ Due to recent changes in the geography of Eastern Europe, the time zones in the IVO-V11 world time clock are different from the actual ones.

Changing the CD-I Viewer Settings

The CD-I viewer has been configured at the factory to certain preset values (page 28) so that you can enjoy CD-I programs as soon as possible. The only thing you must do when you operate the viewer the first time is set the date and time (page 10).

However, the CD-I viewer provides three control panels (as shown below) so that, if necessary, you can customize the viewer to your particular needs. (See page 28 for a list of settings you can change.) When you want to do so, follow the procedure described below to make and save changes.

To move between the three control panels, use [▶] or [◀]. [▶] advances to the next panel, while [◀] goes back to the previous one.


Press ▽ until [▶] is highlighted, then press button 1 or button 2.
Use ▽ and ▷ to highlight [▶], then press button 1 or button 2.
1st control panel
2nd control panel
3rd control panel
Zone NewYork
Jan 1 1993 12:00 AM
Initial Screen menu
Clock Display Mode 12 hour
Calendar Display Mode Sunday start
Exit
CD-I Auto Start no
Auto Power Off none
Set Disc Handling auto
Key Pad Speed normal
Test Pattern
0 100%
CATALOG
Jul 07 1993 12:30 25%
DICTIONARY
Jul 11 1993 13:27 11%
JAZZ
Jul 24 1993 15:48 30%
High_Score
Aug 02 1993 23:06 15%
Clear
Clear all
Use ▽ and ◁ until [◀] is highlighted, then press button 1 or button 2.
Press ◁ until [◀] is highlighted, then press button 1 or button 2.

Use only the buttons on the viewer to make changes; the mouse cannot operate the control panels.

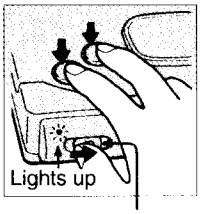
Making and Saving Changes

If the viewer is already on, turn it off.

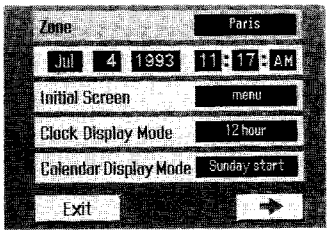
See the above illustration for movement between the control panels, and see page 28 for a list of settings that you can change.

To restore to the factory preset values, see page 32; to cancel the changes, see page 34.

1 While holding both button 1 and button 2 down, turn on the viewer. Do not release the buttons until the 1st control panel appears.
The 1st control panel appears.

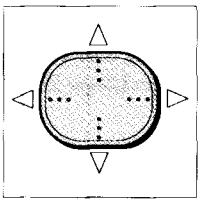


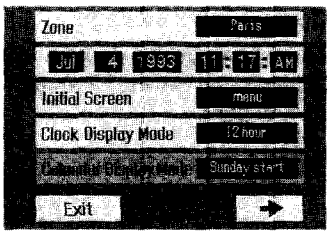
Slide the power switch (with the green button pressed) to the right, then release it.



2 Press ◁, △, ▽, or ▷ to highlight the desired setting for change.

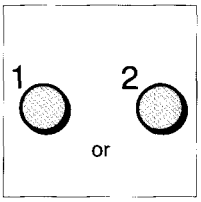
In this example, Calendar Display Mode : Sunday start is highlighted.

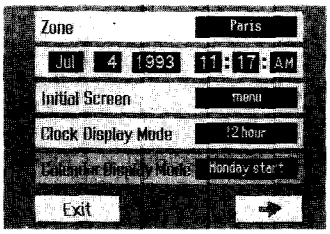




3 Press button 1 or button 2 until the desired value for the highlighted setting appears.

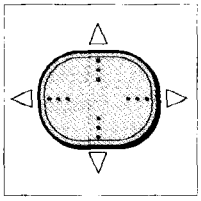
In this example, Calendar Display Mode : Monday start is selected.

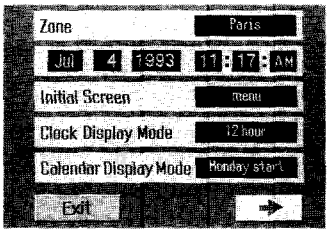




4 Repeat steps 2 and 3 to change other settings.

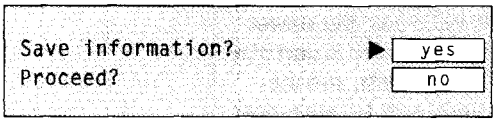
5 To end, use ◁, △, ▽, or ▷ to highlight Exit.

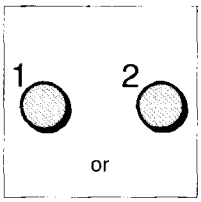


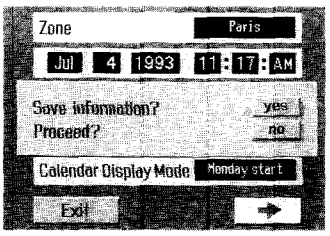


6 Press button 1 or button 2.

The following message appears.



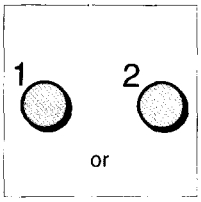


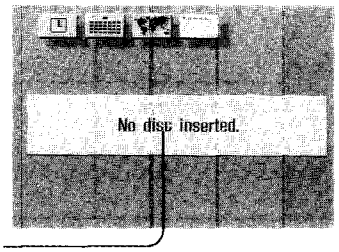


7 Make sure ▶ is pointing at yes, then press button 1 or button 2 to save the changes.

If ▶ is pointing at no, press △ to move ▶ to yes.

The changes are saved.





Message disappears in a few seconds.

Control panel settings

The following table summarizes the 1st and 2nd control panel settings. Use the steps described in the "Making and Saving Changes" section (page 26) for changes. See page 29 for information on the 3rd control panel.

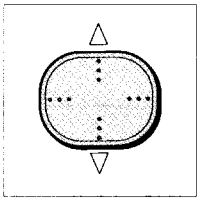
	Setting	Factory Preset Value	Description	When Button 1 or Button 2 is Pressed
1st control panel	Date and Time	Zone:New York	Set date and time. See "Setting the Date and Time" (page 10) for details.	[New York] is displayed in cyan.
		Jan 1 1993 12:00: AM		[Jan] is displayed in cyan.
	Initial Screen	menu	Select a function to display when the viewer is turned on. If a disc (CD-I or CD) is inserted, the disc information will always be displayed instead.	menu → clock → calendar → world time clock
	Clock Display Mode	12 hour	Set the digital clock display to the 12- or 24-hour format.	12 hour ←→ 24 hour
	Calendar Display Mode	Sunday start	Set the first day of the week to Sunday or Monday.	Sunday start ←→ Monday start
2nd Control Panel	CD-I Auto Start	no	Enable auto start when a CD-I disc is inserted.	no ←→ yes
	Auto Power Off	none	Automatically turn off the viewer at a preset time if no disc is played or if the date and time function is displayed.	none → 5 min. → 10 min. → 30 min.
	Set Disc Handling	auto	Handle multi-disc CD-I title (a program is recorded on multiple CD-I discs). If set to auto, the viewer will check for such feature; if set to yes, the viewer will always assume the disc is part of a multi-disc title. For details, see the manual that comes with the multi-disc CD-I title.	auto → yes → no
	Key Pad Speed	normal	Set how fast the markers or pointer should move when the cursor key is pressed during a CD-I disc operation.	normal → fast → slow
	Test Pattern	—	Used for adjusting the color pattern on a TV connected to the viewer (page 40).	The test pattern appears. Pressing the button again clears the pattern.

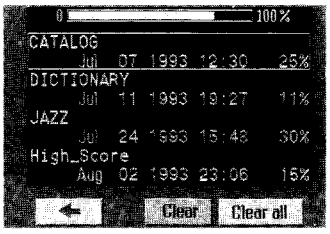
Clearing the Memory

The viewer contains memory which can store information — in the form of a file — about a disc played. Only some discs such as games can use this function. When the memory is full, you need to remove some or all of the files; otherwise an inserted disc cannot be played (page 14).

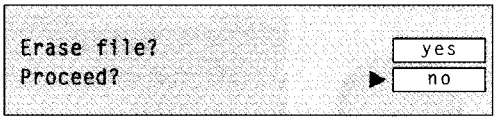
Removing one or more files

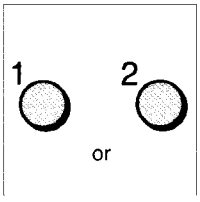
1 Use △ or ▽ to move the frame line to the file for removal.

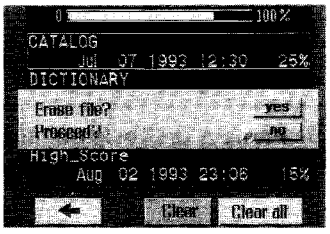




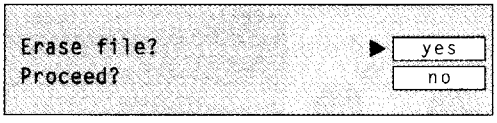
2 Press button 1 or button 2.
The following message appears.

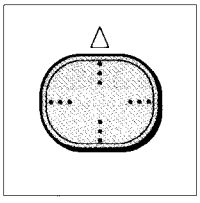


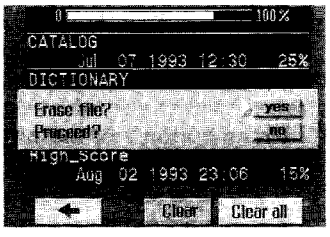




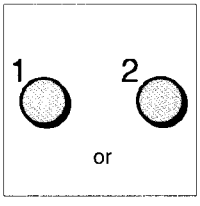
3 Press △ until ▶ is pointing at [yes].

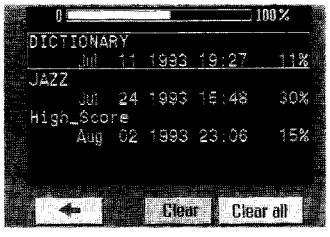






4 Press button 1 or button 2.
The file is removed.
If you have selected [no] in step 3, then the file is not removed and the viewer returns to where it was in step 1.

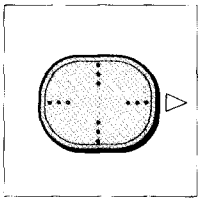


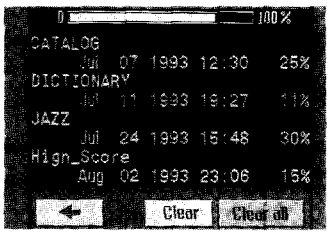


5 Repeat steps 1 to 4 to remove other files.

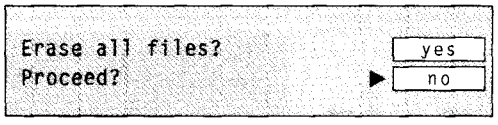
Removing all files

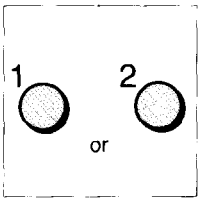
1 Press ▷ until [Clear all] is highlighted.

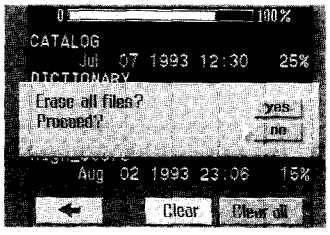




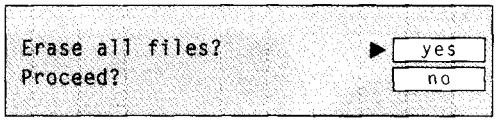
2 Press button 1 or button 2.
The following message appears.

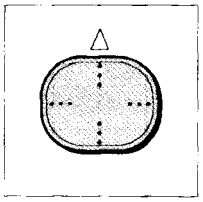


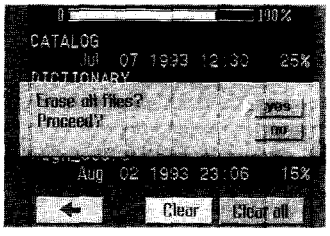




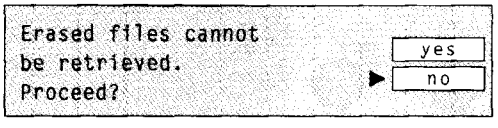
3 Press △ until ▶ is pointing at [yes].

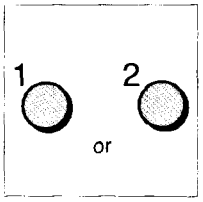


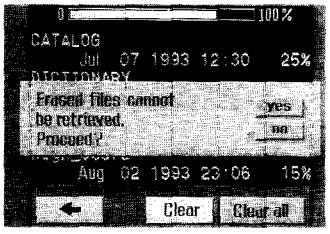




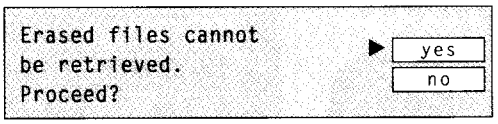
4 Press button 1 or button 2.
The following message appears.
If you have selected [no] in step 3, then the files are not removed and the viewer returns to where it was in step 1.

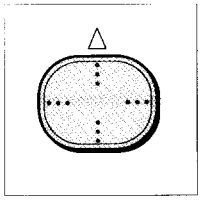


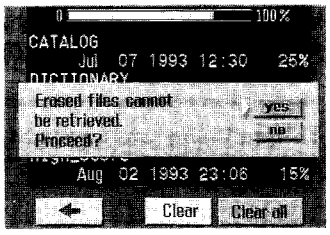




5 Press △ until ▶ is pointing at [yes].



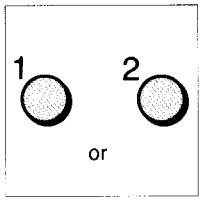


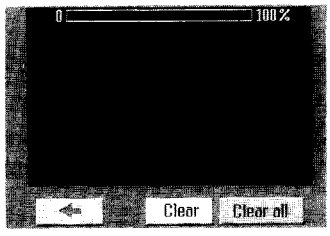


6 Press button 1 or button 2.

All the files are removed.

If you have selected [no] in step 5, then the files are not removed and the viewer returns to where it was in step 1.



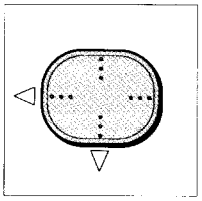


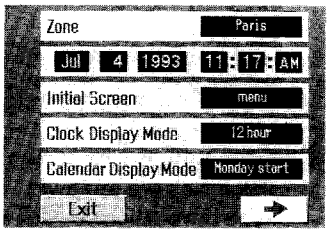
Restoring to the Factory Preset Values

You can use the 1st control panel (page 26) to restore all the settings to their factory preset values (page 28).

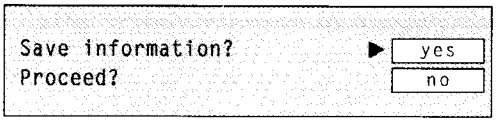
Note that this also changes the date and time. Therefore, when you operate the viewer again, you need to set them correctly (page 10).

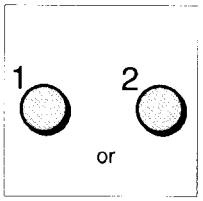
1 Use ▽ and ◁ to highlight [Exit].

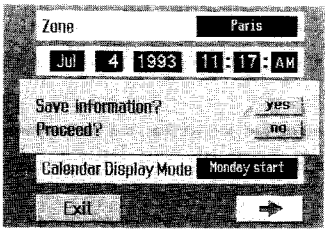




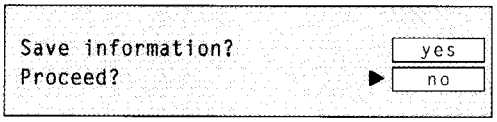
2 Press button 1 or button 2.
The following message appears.

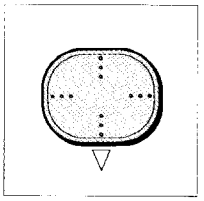


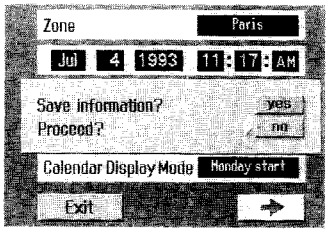




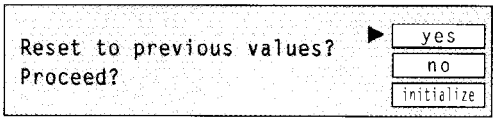
3 Press ▽ until ▶ is pointing at [no].

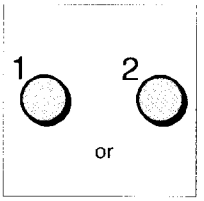


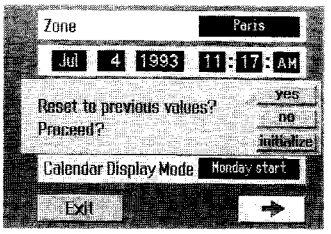




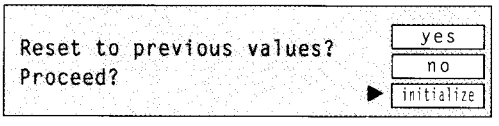
4 Press button 1 or button 2.
The following message appears.

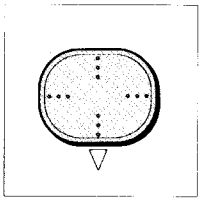


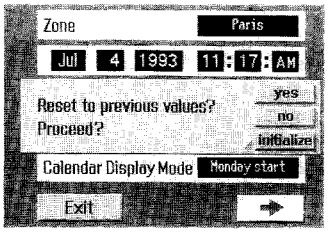




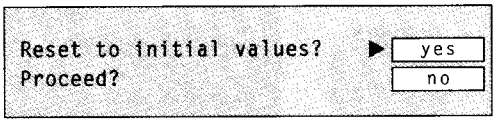
5 Press ▽ until ▶ is pointing at [initialize].

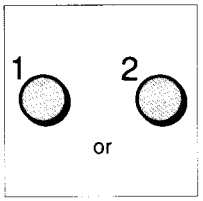


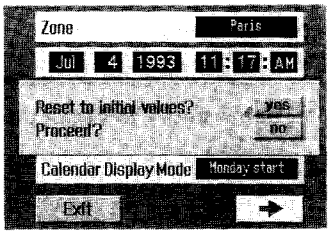




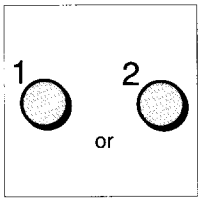
6 Press button 1 or button 2.
The following message appears.

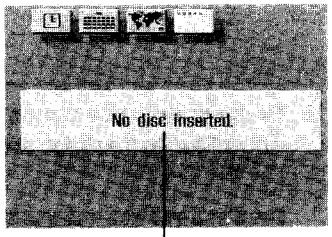






7 Make sure ▶ is pointing at [yes], then press button 1 or button 2.
If ▶ is pointing at [no], press △ to move to [yes]. All the control panel settings return to their factory preset values.



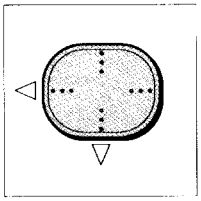


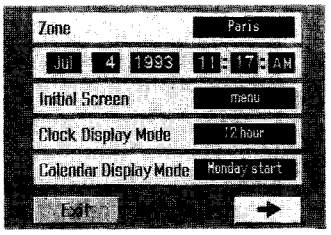
Message disappears in few seconds.

Canceling Changes

If you decide not to save changes made to the control panel settings, you can cancel them from the 1st control panel.

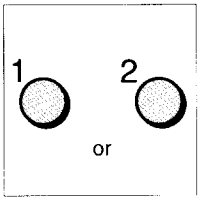
1 Use ◁ and ▽ to highlight [Exit].

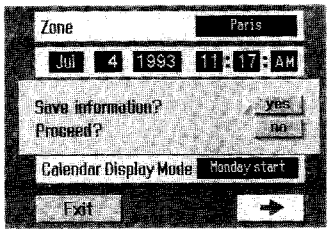




2 Press button 1 or button 2.
The following message appears.

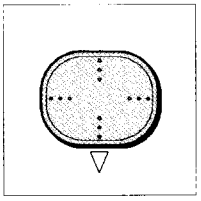
```
Save information?          ▶ yes
Proceed?                     no
```

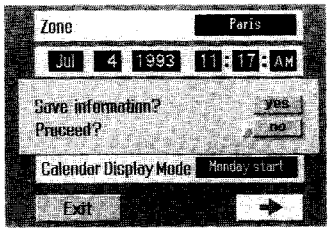




3 Press ▽ until ▶ is pointing at [no].

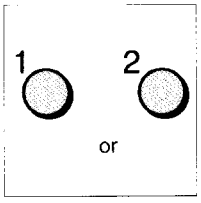
```
Save information?            yes
Proceed?                   ▶ no
```

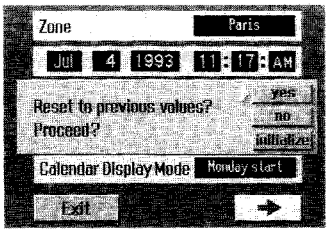




4 Press button 1 or button 2.
The following message appears.

```
Reset to previous values?  ▶ yes
Proceed?                     no
                             initialize
```

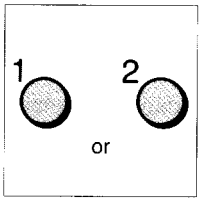


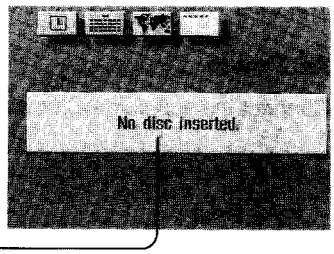


5 Make sure ▶ is pointing at [yes], then press button 1 or button 2.

If ▶ is pointing at [no], press △ to move to [yes].

All the control panel settings return to their previous values.





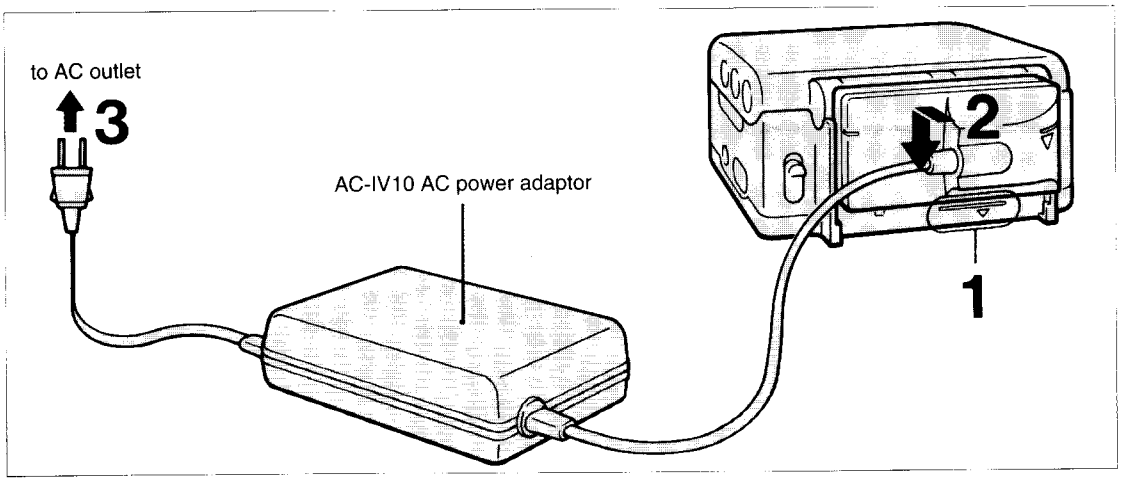
Message disappears in few seconds.

Choosing a Power Source

The CD-I viewer works with AC power (house current) or a rechargeable battery pack.

AC Power

Connect the supplied AC power adaptor as below.



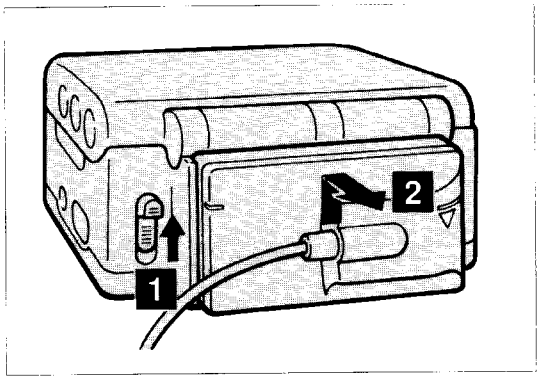
1 Align the bottom of the connecting plate with the line on the viewer.

2 While pressing the connecting plate, slide it as indicated.

3 Plug the AC power adaptor into the AC outlet.

Removing the connecting plate

While pushing up the BATT button 1, slide the connecting plate as indicated 2.

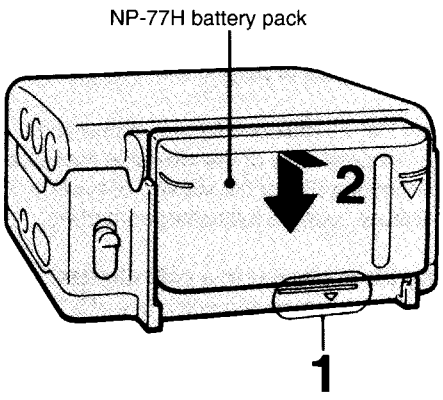


Refer also to the operating manual that comes with the AC-IV10.

Battery Pack

The viewer can also work with a battery pack (not supplied). Two types of battery packs are available: NP-77H/77HD, and NP-77. A new battery pack must be charged. Also, If you use the BC-S10 battery charger or AC-S10 AC power adaptor, fully discharge the battery pack first, and then charge it completely.

The NP-77H battery pack is used here for explanation.



A battery pack can be removed from the viewer the same way as the AC power adaptor.

1 Align the bottom of the battery pack with the line on the viewer.

2 While pressing the battery pack, slide it as indicated.

Types of chargers

The CD-I viewer package does not include any charger; you need to provide one yourself. The chargers you can use are:

Type	Charger
Direct plug-in	BC-S10 or -77 battery charger
Via power cord	AC-S10 or -V30 AC power adaptor (for one battery pack) AC-V55 AC power adaptor (for two battery packs)

The BC-77 battery charger cannot be used to charge the NP-77H/77HD battery pack.

Battery life

The table below lists the number of hours a fully charged battery pack can deliver for playing a compact disc continuously at room temperature. The respective battery life for playing CD-I discs may be shorter.

Battery Pack	Hours
NP-77H/77HD	About 1 hr 30 min
NP-77	About 1 hr 20 min

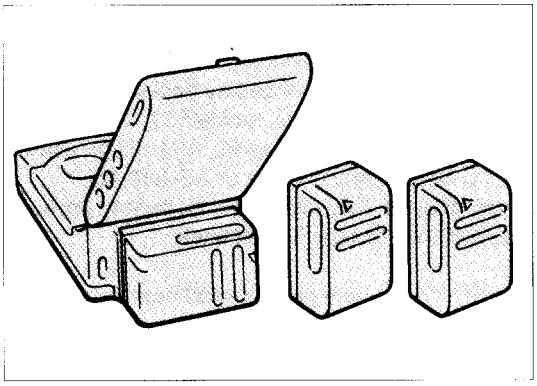
Using a Battery Pack Effectively

How to Prepare a Battery Pack

Have sufficient battery pack power to do 2 or 3 times the amount of playing that you plan to do.

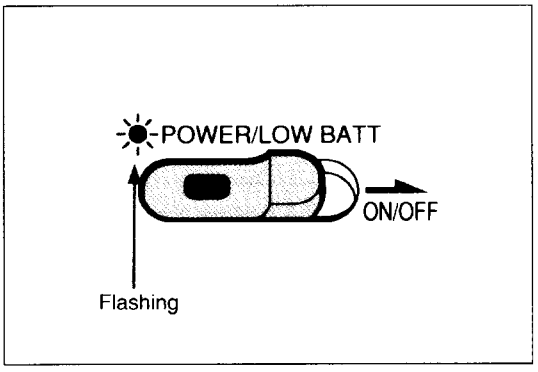
"Battery life" as described in the instruction manual or catalogue of the viewer is measured by the continuous use of the viewer, at room temperature, using a fully charged battery.

Battery life is shorter in a cold climate.
Cold climates reduce the efficiency of a battery and cause it to discharge more quickly.



When to Replace the Battery Pack

When the battery is low, the POWER/LOW BATT indicator becomes orange and starts flashing; this is the best time to replace the battery pack.
Turn off the viewer and replace the battery pack with a fully charged one.



On Charging

Before using the battery pack, charge it completely. A brand-new battery pack is not charged.

Recharge the battery pack only when it is fully discharged.

If you use the BC-S10 battery charger or AC-S10 AC power adaptor, fully discharge the battery first, and then charge it completely. Repeated charging while some capacity remains will reduce the battery capacity.

However, the original battery capacity can be recovered if you fully discharge and charge the battery again.

Recharge the battery pack just before use.
If the battery pack is not used for a long time (about 1 year), it becomes discharged. Charge it again, but in this case the battery life will be shorter than normal. After several charging and discharging cycles, the battery life will recover its original capacity.

Always Keep the Terminals Clean

If the terminals (metal parts on the battery pack) are soiled, the battery life will become shorter.

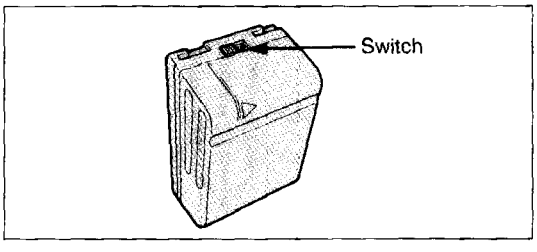
When the terminals are soiled, or when the battery pack has not been used for a long time, repeatedly attach and remove it several times. This will improve the contact of the battery pack and the viewer. Also, wipe the + and – terminals with a soft cloth or tissue.

How to care for battery pack

- Remove the battery pack from the viewer after use, and keep it in a cool place. When the battery pack is attached to the viewer, a small amount of current flows to the viewer even if the power switch is turned off. This causes overdischarge and, consequently, shortens battery life.
- The battery pack is always discharging even when it is not in use. Thus the battery should be charged before each use.
- When the battery pack is not in use, store it in a case. If the + and – terminals are short-circuited with a piece of metal, the battery heats up abnormally. This is very dangerous.

How to use the switch on the battery pack

Use this switch as a reminder of the charging condition. Set the switch to the "no mark" position when the charging is completed. Set the switch to the "red mark" position when the battery is fully discharged.



How many times can the battery pack be recharged

It can be fully charged and discharged about 500 times under normal temperatures. When the POWER/LOW BATT indicator turns orange and starts flashing with a fully charged battery pack, replace the battery pack with a brand new one.

Charging temperature

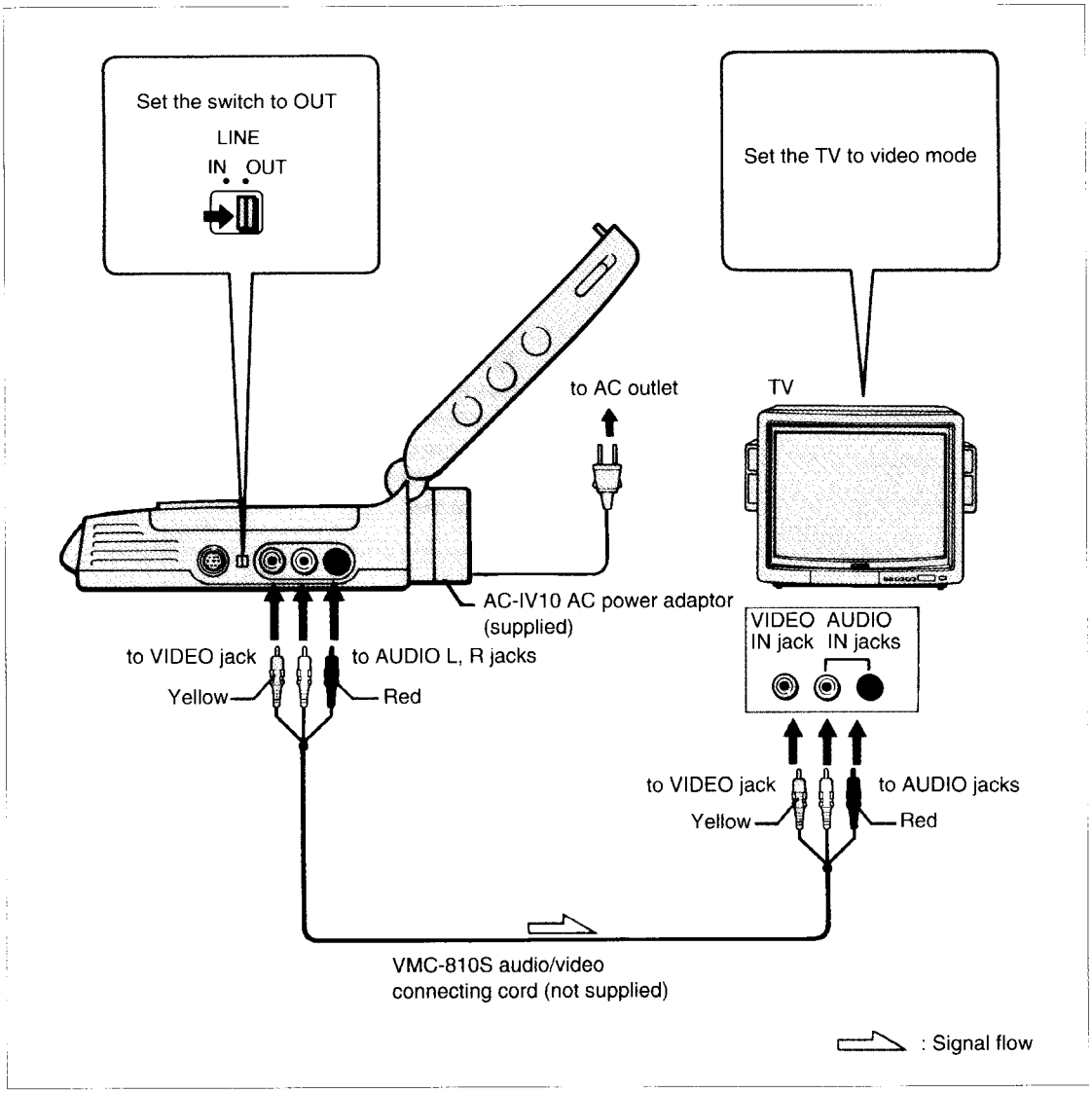
Lower temperatures require a longer charging time. Charging under a temperature ranging from 10°C to 30°C (50°F to 86°F) is recommended.

Why the battery pack heats up

While the battery pack is being charged or used, a chemical change occurs inside the battery pack which generates electric energy. Consequently, the battery pack becomes warm, but this is not dangerous.

Connecting to a TV

You can watch CD-I disc programs on a TV equipped with video and audio input jacks. Use an audio/video connecting cord (not supplied) for the connection and refer also to the operating instructions that come with the TV for more information. AC power is recommended for this purpose.



If the TV has only one AUDIO IN jack

This means the TV can only play monaural sound. The audio/video connecting cord VMC-910MS (pin plug (3) ←→ pin plug (2)) is recommended. Connect the black plug to the TV's AUDIO IN jack.

When using the VMC-810S, etc, use the white plug to connect to the AUDIO IN jack on the TV; do not use the red plug.

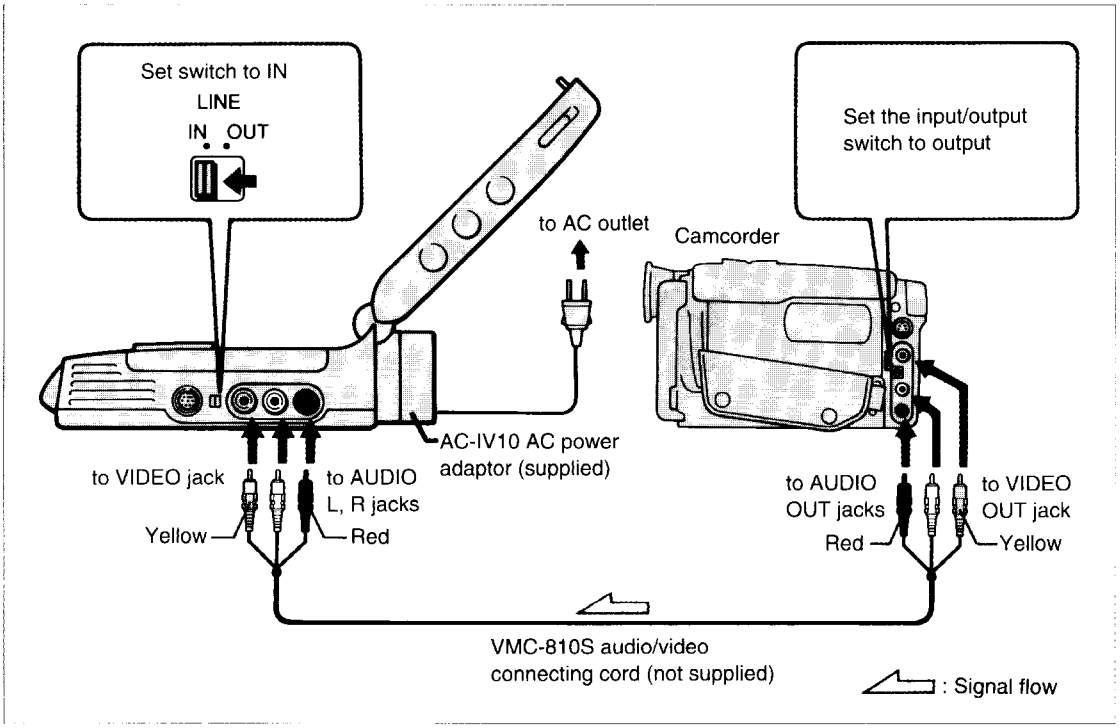
To adjust the sound volume

The monitor speaker of the viewer can output sound in monaural only. Use its VOLUME control to adjust the sound level.

Some discs may cause distortion to the picture on the TV.

Connecting to Video Equipment

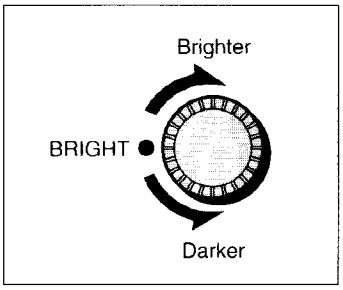
You can use the viewer's LCD display to enjoy video output from video equipment. For the connection, refer also to the operating instructions that come with the video equipment.



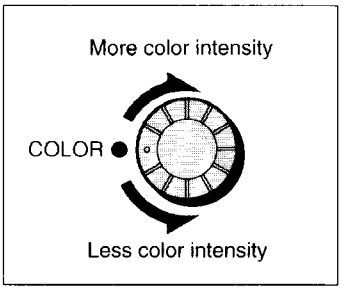
Adjusting the picture

The following three controls are located on the right side of the top cover.

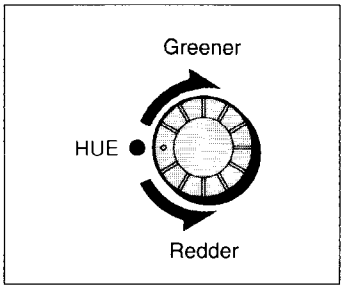
Brightness



Color Intensity



Skin Tone



If the power is suddenly cut off

This happens when the auto power-off function is active (page 28).

To disable this function, set the [Auto Power Off] to [none].

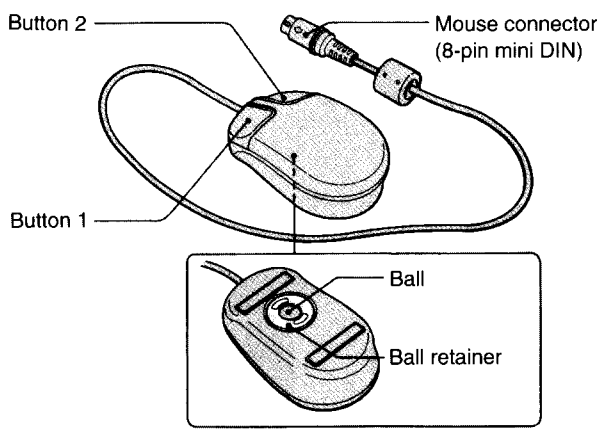
If the video equipment has only one AUDIO OUT jack

This means the video equipment can output sound in monaural only. The VMC-910MS audio/video connecting cord (pin plug (3) ←→ pin plug (2)) is recommended. Connect the black plug to the AUDIO OUT jack on the video equipment.

When using the VMC-810S, etc, use the white plug to connect to the AUDIO OUT jack on the video equipment; do not use the red plug.

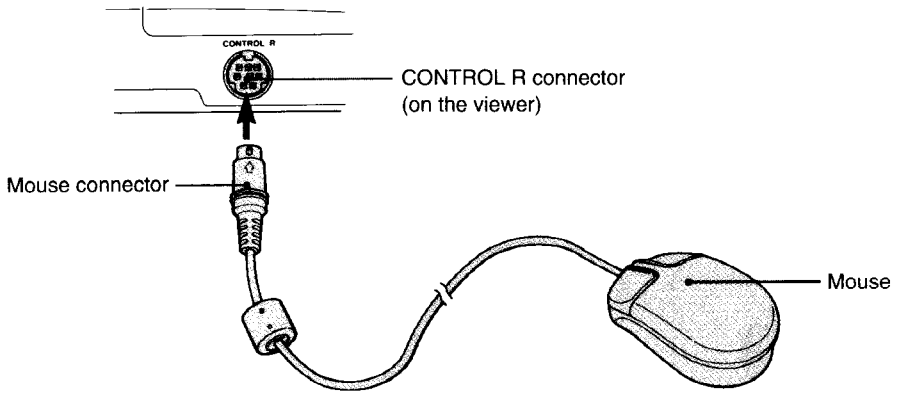
Using the Supplied Mouse

Overview



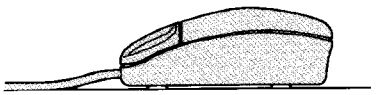
Connection

Note **Turn off the viewer before connecting the mouse.**



Putting the Mouse on the Table Top

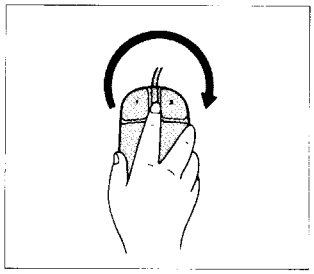
Be sure to place the mouse on a clean, flat surface.
Otherwise the mouse will not work properly.



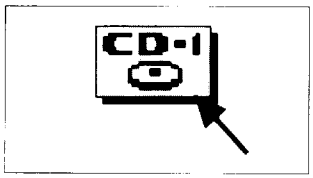
Using the Mouse

1 Grasp the mouse and slide it across the table top, while watching the ↖ (pointer) move on the screen.
The pointer's movement corresponds to that of the mouse.

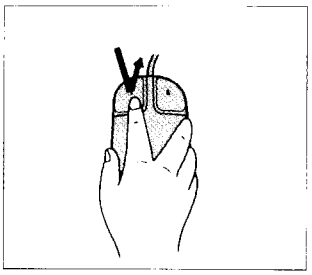
Note: Each CD-I disc and connected unit have their own pointer shape.



2 Keep moving the mouse until the ↖ (pointer) is on the item you want.
The ↖ (pointer) on the screen will not move if the mouse is not on the table top.

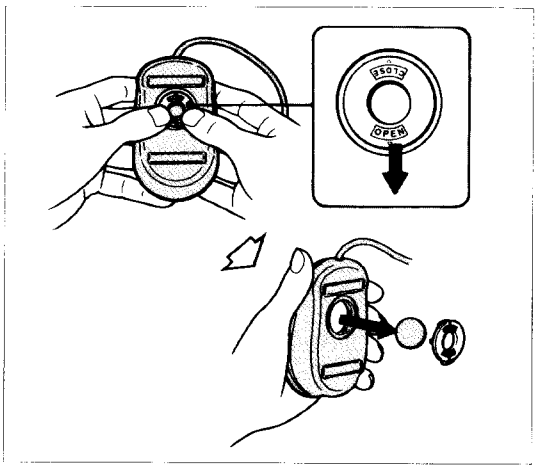


3 Press and release (click) button 1 or button 2.



Cleaning

To clean the mouse, take the ball out as illustrated. Clean the ball with a mild detergent solution and wipe it with a dry cloth. Then, replace the ball and ball retainer.



Cautions

- Do not allow the mouse to come in contact with dust or liquid spills (water, oil etc.)
- If the mouse does come in contact with moisture or dust, use a lint-free cloth with mild detergent to clean the ball and dry it well.
- The mouse is a very precise mechanical device, so handle it with care. Do not drop or hit it.
- Do not disassemble the mouse. (That is, do not remove the screws on bottom housing.) Refer servicing to your local Sony service facility.
- Do not try to pull out the cable. It may cause damage to the cable and the connector. Do not pick up the mouse by holding the cable.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Precautions

On Safety

- **Do not disassemble the viewer.**
  As the laser beam used in this viewer is harmful to the eyes, do not attempt to disassemble the casing.
- **Do not put any foreign objects into the viewer.**
  A safety device is built into the viewer so that when the disc cover is opened, the safety device will stop the laser beam from functioning. Any foreign objects (e.g. pin) inside the viewer will defeat the purpose of the safety device and the laser beam may come out when the cover is opened.
- **Do not wrap the viewer in a piece of cloth.**
  When the viewer is used with the AC power adaptor, do not wrap the unit in a cloth, blanket, etc. If you do so, the temperature inside and outside the viewer may rise considerably, resulting in malfunctioning of the viewer or serious accidents.
- **Do not subject the viewer to shock, or a malfunction may result.**
- **When the viewer is in use, its bottom will become hot.**
  So be careful if you place it on the carpet, etc.

On condensation

If the viewer is brought directly from a cold location to a warm one, or is placed in a very damp room, condensation may occur on the lens inside the viewer, causing it to work incorrectly. If this happens, remove the disc inside, and leave the viewer in a warm place for a few hours until the condensation evaporates. If the problem still continues, call your local Sony service facility for assistance.

About the lens

The lens on the disc table should be kept clean. Do not touch the lens or poke at it. If you do so, the lens may be damaged and the viewer will not operate properly. To keep the dust out, always keep the disc cover closed except for inserting discs.

About the temperature

The bottom of the viewer may get warm. This is not a malfunction. The AC power adaptor also gets warm. This is also not a malfunction. However, if the AC power adaptor gets excessively hot, disconnect it and have it checked by your local Sony service facility.

On installation

Do not place the viewer:

- Under direct sunlight or near heat sources such as radiators.
  Operate the viewer between 5°C to 35°C (41°F to 95°F)
- On the dashboard or inside your car parked under direct sunlight (particularly in the summer).
- Near magnet, speaker, or a TV where a magnetic field exists.
- In a very dusty place.
- In an inclined position.
- Subject to mechanical vibration or shock.
- Exposed to moisture or rain.

When listening to a CD-I or a compact disc

- Adjust the sound volume to a level comfortable to your ears.
- Try not to disturb people around you with the sound leaking from your headphones.

If any problem occurs

If any problem occurs, or if a foreign object falls into the viewer, turn off the viewer and call your local Sony service facility for assistance.

On the LCD display

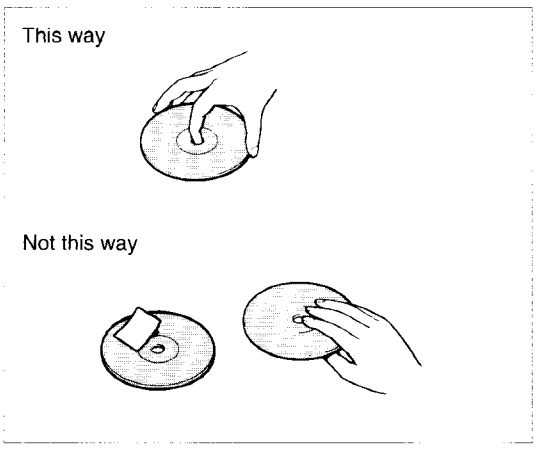
- Do not push the display forcibly, otherwise uneven color distribution or viewer trouble may occur.
- Avoid operating the viewer at temperature below 5°C (41°F) or above 35°C (95°F).
- If the viewer is used in a cold place, a residual image may appear on the display. This is not a malfunction of the unit.
- Constant bright points of light (red, blue, or green) may appear on the display. This is not a malfunction of the unit.

On the built-in lighting system

A built-in lighting system is assembled inside the LCD display of this unit. The life of the small fluorescent tube used for this built-in lighting system runs out over a period of use. If the lamp becomes dimmer or goes off immediately after you turn it on, even with a new battery, replace the lamp with a new one. To replace the lamp, consult the dealer where you purchased the unit, or a local Sony service facility. The expected life of the small fluorescent tube is about three years if this unit is used for an hour each day. When you use this unit in a cold environment, the fluorescent tube will be dimmer at first. As soon as the temperature of the tube rises, the unit will regain its original brightness.

Handling CD-I or compact discs

- Always hold a disc by its edge. Do not touch the surface (the side without a label).
- Do not stick paper or write anything on the surface of the disc.



Storing CD-I or compact discs

- Do not store the discs
  - subject to high temperature, e.g. direct sunlight.
  - in a very humid environment.
  - on the dashboard or inside your car parked under direct sunlight (particularly in the summer).
- When you are not going to play a disc for a long time, remove it from the viewer. Keep the disc in its case; otherwise the disc may warp. Do not stack it with other discs or stand it in an inclined position.

Maintenance

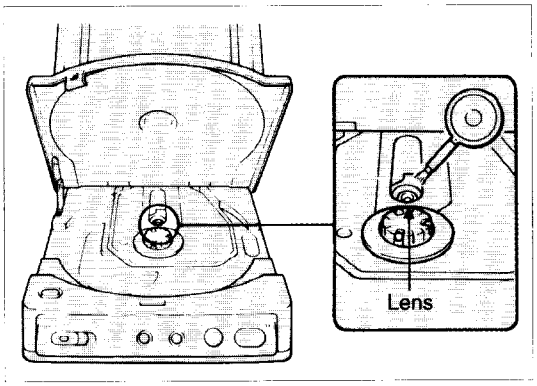
Viewer

Cleaning the casing

Clean the casing with a soft cloth. If the dirt is serious, slightly moisten the cloth with a mild detergent solution. Do not use solvents such as thinner, benzine, or alcohol, as they may damage the finish of the casing.

Cleaning the lens

If you accidentally touch the lens with dirty fingers or if dust on the lens prevents the viewer from operating properly, open the disc cover and clean the lens with a KK-9 lens cleaning kit (not supplied).



Cleaning the headphones plug

Keep the headphones plug clean to obtain optimum sound. Wipe the plug with a dry, soft cloth.

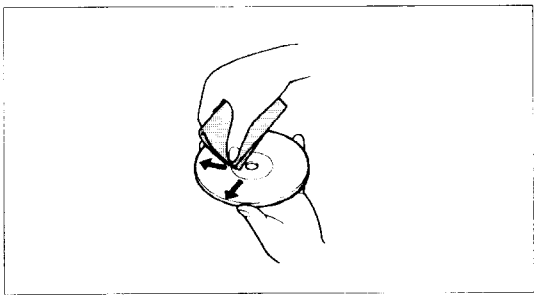
LCD display

Use a soft cloth to wipe the display.

Discs

The CDM-1K/2K CD cleaning kit (not supplied) is recommended.

- If a disc becomes dirty, clean it with a cleaning kit.
- Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for use with records. They may damage the disc.
- Clean the disc from the center out, using a clean soft cloth.
- If the dirt is serious, slightly moisten the cloth with water and wipe it, followed by a dry cloth.



Messages

If any problem occurs during the operation and a message appears on the LCD display, use the following table to try to solve the problem.

Message	Try This	See Also Page
This disc cannot be played on this machine. Please check the disc.	Remove the disc and check its format.	5
Disc error found. Please check the disc.	Remove the disc and look for dirt or damage. If necessary, clean the disc.	46
System error found. Turn off the power immediately.	Turn the viewer off, then back on again. If the problem still continues, call your local Sony service facility for assistance.	—
Would you like to set up the control panels? ▶ [yes] [no]	The viewer settings have returned to their factory preset values. Use the steps below to access the 1st control panel and set the correct date and time. If this is not done, the message will continue to appear every time the viewer is turned on. 1 With the viewer still connected to a power source, insert a new lithium battery. 2 Move ▶ to point at [yes], then press button 1 or button 2. 3 Set the correct date and time. If the problem still continues, call your local Sony service facility for assistance.	10
The time and date are not properly set. Please reset them. ▶ [Reset]	Set the correct date and time.	10
No disc is inserted.	This is not a problem. The message will disappear in a few seconds. Pressing button 1 or button 2 will immediately clear the message.	14, 16
Memory full. Please erase 10 % of the saved files. ▶ [yes]	The memory is full, so you must erase some of the files. Press button 1 or button 2 to bring up the 3rd control panel (in this case the other two control panels cannot be accessed). Erase the unnecessary files to free up about 10% of memory. When this is done, the [Please wait a moment...] message appears for a few seconds, then the initial screen is displayed.	29

Troubleshooting

If a problem occurs without a message appearing on the LCD display, use the following table to troubleshoot the viewer. If the problem still continues, call your local Sony service facility for assistance.

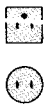
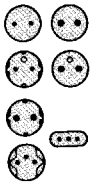
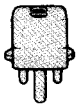
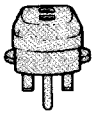
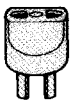
	Problem	Cause	Check	See Also Page
Operation	The CD-I disc screen does not appear when a CD-I disc is inserted.	• The disc is inserted upside down.	• Insert the disc with the label side up.	14, 16
		• The disc or the lens is dirty.	• Clean the disc or lens.	46
	The compact disc screen does not appear when a compact disc is inserted.	• Condensation occurs.	• Take out the disc and leave the viewer for two or three hours until the condensation evaporates.	44
		• The disc cover is not closed properly.	• Close the cover properly.	14, 16
	The CD-I disc screen appears, but the inserted CD-I disc does not start playing.	• The memory is full.	• Remove some or all the unnecessary files.	29, 47
Sound & Picture	The sound skips, or picture does not appear.	• The CD-I, compact disc, or the lens is dirty.	• Clean them.	46
		• The CD-I or compact disc is seriously damaged.	• Replace the disc.	—
		• The viewer is subject to strong vibration.	• Keep the viewer away from vibration.	44
	No sound comes from the headphones.	• The headphones are not connected correctly.	• Plug the headphones properly into the PHONES jack.	17
		• The VOLUME control is set to the minimum level.	• Adjust the VOLUME control to a comfortable level.	14, 17
	No picture appears on the LCD display.	• The LCD display is too bright or too dark.	• Use the BRIGHT control to adjust the brightness to an appropriate level.	15
		• The LINE IN OUT switch on the viewer is set to IN.	• Set the switch to OUT.	40
		• The LCD display is turned off.	• Press the LCD ON/OFF button to turn on the display.	15
	No picture appears on the TV.	• The viewer is not properly connected to the TV.	• Connect them properly.	40
		• The LINE IN OUT switch on the viewer is set to IN.	• Set the switch to OUT.	
		• The TV/video switch on the TV is set to TV.	• Set the switch to video.	

	Problem	Cause	Check	See Also Page
Sound & Picture	No sound comes from the TV.	• The viewer is not properly connected to the TV. • The sound volume on the TV is set to the minimum level.	• Connect them properly. • Adjust the volume.	40
	No picture appears on the viewer when connected to video equipment.	• The viewer is not properly connected to the video equipment. • The LINE IN OUT switch on the viewer is set to OUT. • The video or audio input/output switch on the video equipment is set to input.	• Connect them properly. • Set the switch to IN. • Set the switch to output.	41
Others	No power is supplied.	• The AC power adaptor is not connected. • The battery pack is almost or completely discharged, or is not installed yet. • The battery pack has expired.	• Connect the AC power adaptor properly. • Install a fully charged battery pack. • Replace with a new one.	9 37 39
	The power suddenly goes off.	• The auto power-off function is active.	• Turn on the viewer again. • Access the control panel and change auto power-off to [Auto Power Off : none]	— 28
	The battery pack is discharged very quickly.	• The viewer is being used in an extremely cold environment. • The battery pack is not fully charged. • The battery pack has expired.	— • After the battery pack is completely discharged, fully charge it. • Replace with a new one.	— 38 39
	None of the buttons work during operation.	• Strong interference from the external environment has caused the viewer's microprocessor to malfunction.	• Use a pointed device to press the CL button on the bottom of the viewer. This resets the viewer.	7

Using the CD-I Viewer Abroad

Each country has its own electricity and TV color systems. Before using your CD-I viewer abroad, check the following points.

You can use the CD-I viewer in any country with the supplied AC power adaptor within 100V to 240V AC, 50/60 Hz. If you cannot attach the power adaptor to an AC outlet, use a power cord plug adaptor (not supplied). The following is a list of the shape of AC outlets and the appropriate power cord plug adaptor required.

AC Outlet Type						
Required Plug Adaptor	Mainly in North America and South America No special plug adaptor is required.				Mainly in Europe	 Mainly in Australia

The CD-I viewer is based on the NTSC color system. If you want to view CD-I programs on a TV, the TV must be based on the NTSC system or PAL-M system with NTSC/PAL-M transcoder. Check the following alphabetical list.

NTSC system countries

Bahama Islands, Bolivia, Canada, Central America, Chile, Colombia, Ecuador, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the USA, Venezuela, etc.

PAL system countries

Australia, Austria, Belgium, China, Denmark, Finland, Germany (former West Germany), Great Britain, Holland, Hong Kong, Italy, Kuwait, Malaysia, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, Thailand, etc.

PAL M system country

Brazil

PAL N system countries

Argentina, Paraguay, Uruguay

SECAM system countries

Bulgaria, France, Guiana, Hungary, Iran, Iraq, Monaco, Poland, former Soviet Union, etc.

You can use the world time clock function abroad. For details, see page 24.

Specifications

System

Model	Compact Disc Digital Audio and Compact Disc Interactive System
D/A conversion	16-bit (44.1 kHz) linear, 8-bit (37.8 kHz)/4-bit (37.8 kHz/18.9 kHz) non-linear
Display system	Transparent TN LCD panel
Drive system	TFT (thin-film transistor active matrix system)
No. of pixels	112,086 (479 x 234)
Lighting device	Built-in lighting system (fluorescent lamp)
Video signal	EIA standard NTSC color (initial display non-interlaced)

Input and output connectors

Video connector	Input/output switch Phono jack (1), 1 Vp-p, 75 ohms unbalanced, sync negative
Audio connector	Input/output switch Phono jacks (2: L, R) Input : –7.5 dBs, impedance more than 47 kilohms Output: –1.6 dBs, impedance less than 10 kilohms
CONTROL R	8-pin mini DIN (1)
PHONES	Stereo minijack (ϕ3.5) (1)

General

Power requirements	Battery mounting surface input: 6 V (battery pack), 7.5 V (AC power adaptor)
Power consumption	Approximately 9 W
Operating temperature	5°C to 35°C (41°F to 95°F)
Speaker	200 mW
Dimensions	139 x 63 x 193 mm (5 1/2 x 2 1/2 x 7 5/8 in.) (w/h/d)
Mass	Approximately 1.2 kg (2 lb 10 oz)
Supplied accessories	See page 6

Mouse

Power consumption	+ 5 V 5 mA
Dimensions	100 x 37 x 62 mm (4 x 1 1/2 x 2 1/2 in.) (w/h/d)
Weight	Approximately 125 g (4 oz)
Cable length	1.5 m (4 feet 11 1/8 in.)
Operating temperature	5°C to 35°C (41°F to 95°F)

Connector pin assignment

CONTROL R connector (on the viewer)

Pin	Signal	Pin	Signal
1	N.C.	5	GND
2	RXD	6	–
3	–	7	RTS
4	–	8	+5V

Mouse connector (on the mouse)

Design and specifications are subject to change without notice.

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